The OIL WEEKLY

10¢ A COPY

Exclusively Devoted To The Production and Transportation of Oil and Gas

February 8, 1929 **Volume 52. No. 8**

65 Sizes Available in HUGHES CONES

As a special service to the industry, Hughes Tool Company carries in stock for prompt shipment, 65 different sizes of Hughes Rock Bit Cones.

In addition to these standard sizes, Hughes Tool Company is equipped to make any size varying 1/8", from 3 7/8" to 25".

Regardless of size and weight of casing there is a set of Hughes Cones that will give a maximum hole to the pay.

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant
HOUSTON, TEXAS

Export Office
Woolworth Bldg.
New York City

its Superiority PROVED AGAIN!

WILSHIRE OIL COMPANY, INC.
REFINERS AND MARKETERS OF PETROLEUM PRODUCTS
LOS ANGELES, CAL.

Dec. 13, 1920.

Mr. H. C. Smith, President
H. C. Smith Mfg. Co.,
Los Nietos, Calif.

Dear Mr. Smith:

We are very much pleased at this time to inform you that your Four-way Demountable Bits, which we have been running in a lot of our holes, have done a lot of very good work. Especially so in drilling-by jobs. We have had four jobs of drilling-by, drill pipe stuck in holes, and have in all four cases went by without any trouble, and did so fast.

We have noticed these bits keep out to gauge, more so than any bits we have ever run. We also noticed that these bits run smoothly in the hole, more so than Fish-tails or any bits that we have ever run of that type. And we are sure when a bit runs smooth we are not giving our drill pipe the grief as we would with other bits.

For making hole, we think they will make more hole, better hole, out to gauge, in less time and easier than any bit we have ever runs and we are at this time running twenty six strings of tools, and new bits can be changed very quickly and easily.

Very truly yours,

WILSHIRE OIL CO. INC.
M. L. Bales
Gen. Field Supt.

MLB
*
ES.

4 reasons-

1. Winged section above bit steadies bit in hole.

2. Serrated construction of bit blades allows easier penetration of either hard or soft formations.

3. Four-way construction of bit lessens strain and fatigue to which drill pipe is subjected.

4. All bits heavily set with a diamond substitute metal and then hard faced.

H. C. SMITH MANUFACTURING CO., INC.
Los Nietos, California
Branch Offices and Warehouses:
Bakersfield, Calif. Ventura, Calif.
Cable Address: "Smithco, Whittier"

H.C.SMITH
TYPE "B"
Demountable Drilling Bit

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1897.

A Super Pump . . . designed for Super Service

SELF LUBRICATING

TIMKEN ROLLER BEARINGS

BABBIT LINED

BUDA ENGINE

This Portable Pumping Unit—consisting of our GASO No. 710 Enclosed Type, Self-Lubricating Power Pump with Tex-Rope Drive from a BUDA 85 H. P. gas or gasoline engine—combines the highest efficiency with extreme ruggedness and durability.

Every working part of this pump runs in oil in an oil-tight case. Pinion shaft bearings are TIMKEN TAPER ROLLER BEARINGS and main bearings are babbit lined—both being easily adjustable to wear. Open hearth steel, continuous tooth, herringbone gears, center driven, running in oil, insure quietness and high efficiency.

Interchangeable liners from 2½-in. to 7-in. diameter give capacities from 38 gallons per minute at 1400 lbs. pressure to 351 gallons per minute at 300 lbs. pressure.

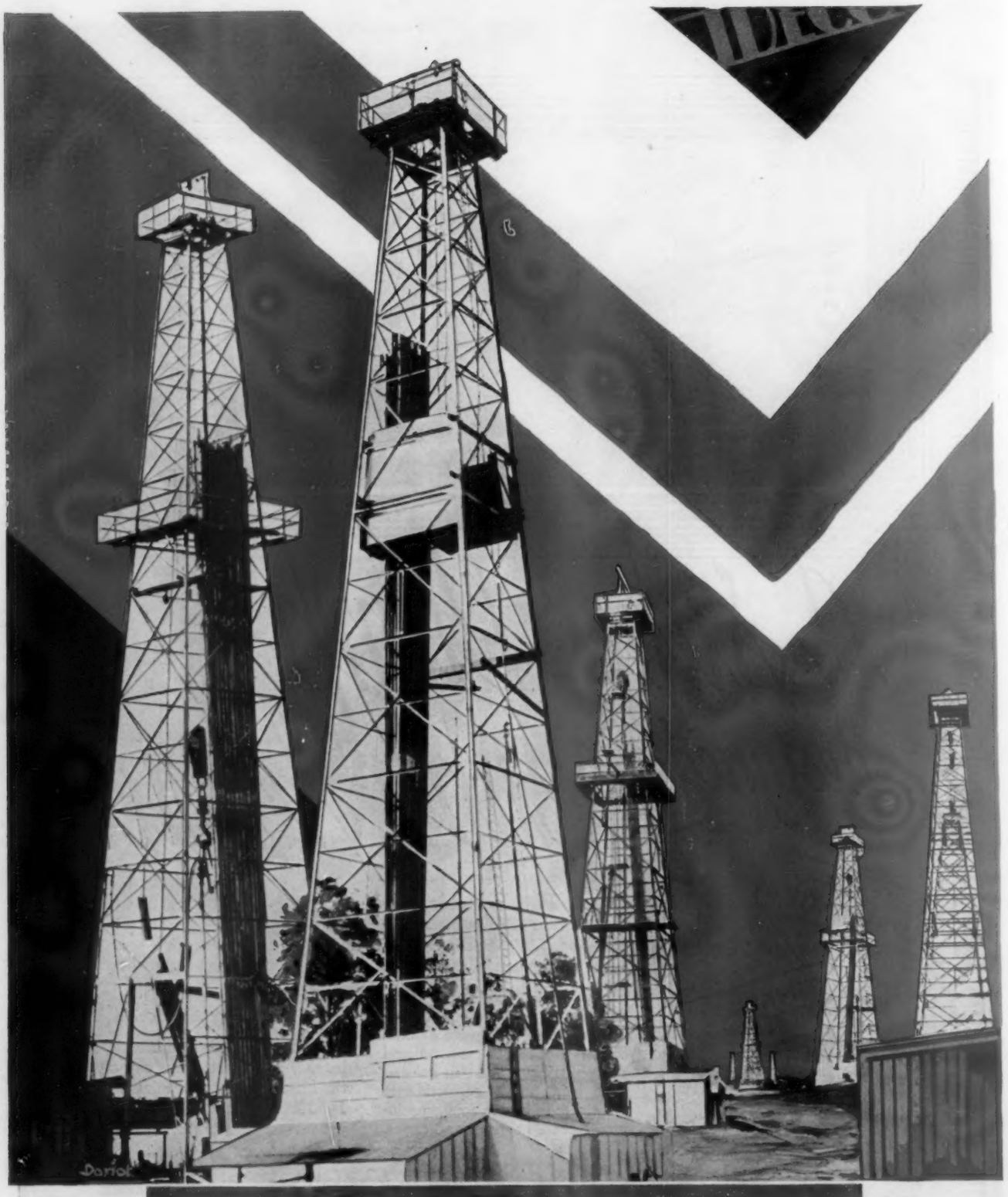
Write, wire or phone for complete information,

GASO PUMP & BURNER MFG. CO. .. *Tulsa, Oklahoma*

Texas Office: 210 Petroleum Building, Fort Worth

GASO PUMPS
for every oil industry need

Say you saw it in The OIL WEEKLY

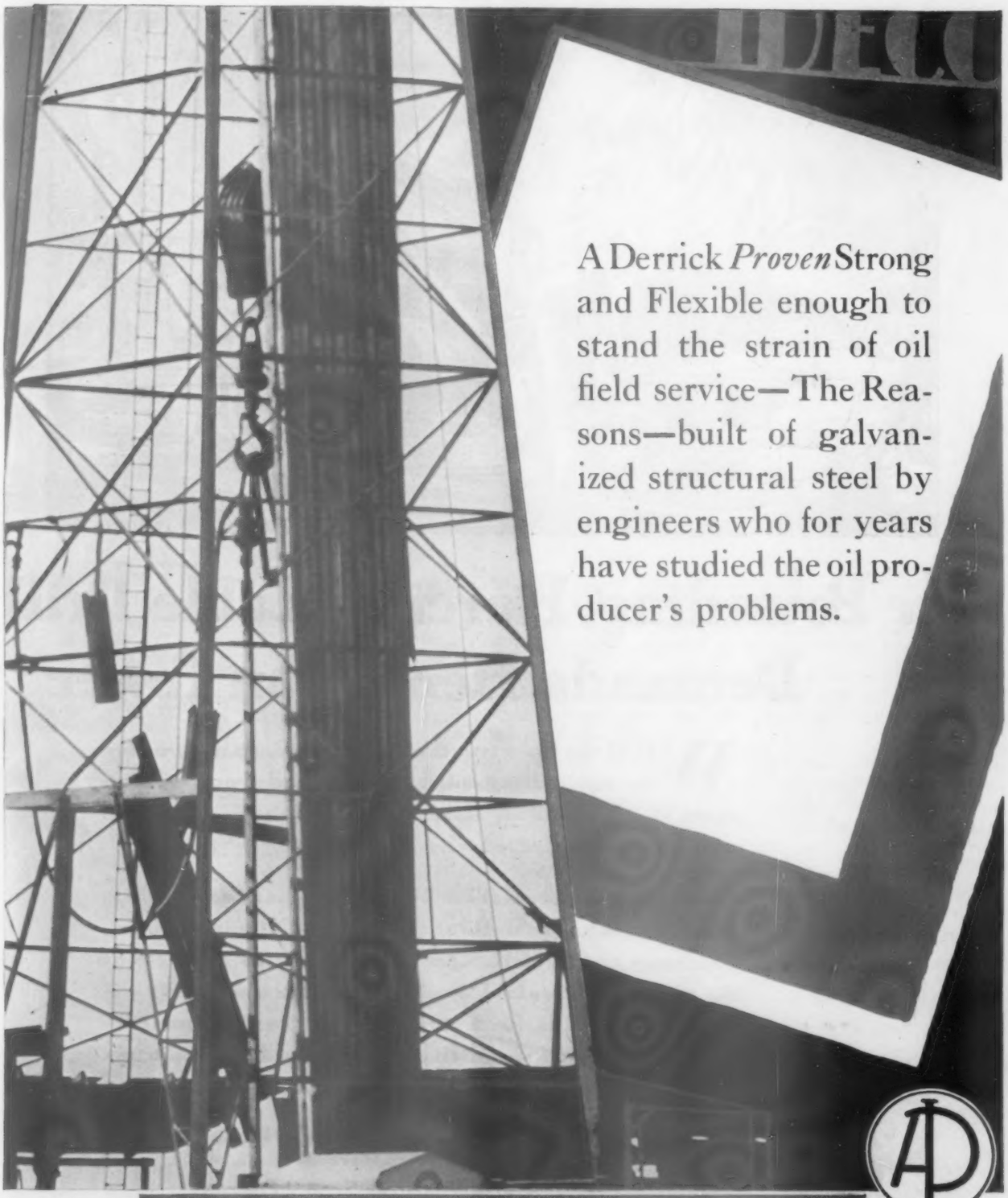


IDECO (GALVANIZED) STEEL

The International Derrick & Equipment Company

Columbus, Ohio **Los Angeles, Cal.**

Say you saw it in The OIL WEEKLY



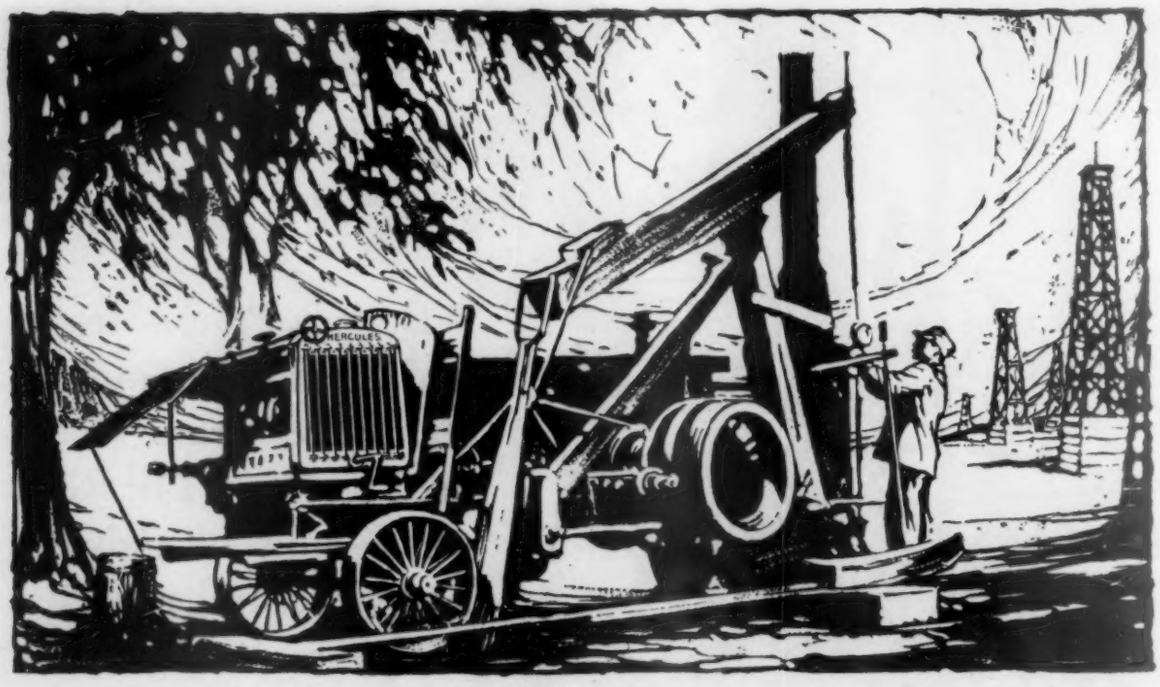
A Derrick *Proven* Strong and Flexible enough to stand the strain of oil field service—The Reasons—built of galvanized structural steel by engineers who for years have studied the oil producer's problems.

DERRICKS

Branches and Stocks—New York, N. Y.; Detroit, Michigan; Dallas, Fort Worth, San Antonio, Houston, Mexia, Wichita Falls, Pyote, Odessa, Amarillo, Luling, Borger, Corsicana, Pampa, Panhandle, Big Springs, Trent, Orange, Bruni, Texas; Shreveport, Oil City, Lake Charles, Louisiana; El Dorado, Smackover, Arkansas; Wichita, El Dorado, Valley Center, Kansas; Tulsa, Oklahoma City, Tonkawa, Drumright, Shidler, Okemah, Seminole, Allen, Sasakwa, Maud, Wewoka, Oklahoma; Los Angeles, Torrance, Bakersfield, Taft, California; Maracaibo, Venezuela.

Export Representation—74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, Calif. 604

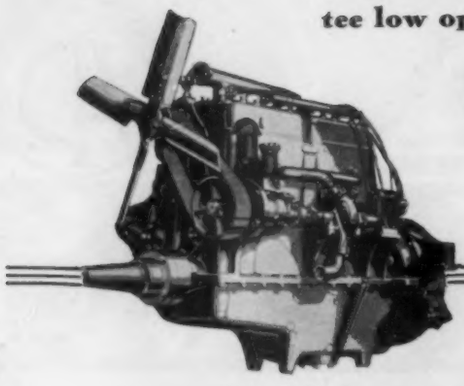
Say you saw it in The OIL WEEKLY



The Pounding, Piercing Cable Drill Demands Herculean Power

WITH the bore two thousand feet deep and more—the bit drilling solid rock—Hercules power, constant and abundant, raises the heavy string of tools with clock-work regularity.

Operated by a Hercules TXOC Power Unit a Star Drilling Machine sinks the wells of the Empire Oil and Refining Company at Oil Hill, Kansas. In oil fields throughout the country, Hercules Power Units are at work performing heavy-duty tasks. Everywhere, the rugged construction and absolute simplicity of Hercules design guarantee low operating costs and long, trouble-free service.



HERCULES MOTORS CORPORATION
General Offices: Canton, Ohio *West Coast Branch:* Los Angeles, Cal.

THE CONTINENTAL SUPPLY COMPANY
ST. LOUIS, MISSOURI
Engine and Parts Distributor in the Mid-Continent Field

HERCULES ENGINES

Say you saw it in The OIL WEEKLY

A Letter from Harry G. Nye

Nye Self-Locking Vise

No.	Pipe	Vise, Complete Net
00	⅛ to 2 ″	$2.82
10	⅛ to 2½″	3.34
20	¼ to 3½″	5.00
30	¼ to 4½″	7.33

Nye Drop Forged Pipe Cutter

No. 1-A	⅛ to 1¼″	$2.75 net
No. 2-A	¼ to 2″	3.30 net
No. 3-A	1 to 3″	5.50 net

Nye Saunders Pipe Cutter

No. 1	⅛ to 1″	$2.00 net
No. 2	1 to 2″	3.00 net
No. 3	2 to 3″	7.33 net
No. 4	2½ to 4.	12.00 net
No. 5	4 to 6″	18.67 net

Nye thin blade cutter wheel, made to fit all standard makes of pipe cutters, and guaranteed against breakage in use. Made both in smooth and knurled edge.

NYE NO. 2
(Toledo Type)
Geared Threading Device Improved

Capacity 2½ in. to 4 in. inclusive. This tool has the same rugged construction as the No. 1 and No. 1A Nye Receding stocks. A ratchet handle and a spider hub threaded for 1-inch pipe is furnished as standard equipment.

Net price complete $50.00
West of Rocky Mountains .. 55.00

FREE TRIAL—ABSOLUTELY GUARANTEED

TO THE OIL MEN OF THE U. S. A.

Fellow Citizens:

Not long ago I wrote a letter about the need for good liars, and ever since then I haven't done anything but open mail. I am afraid I didn't make it clear that I didn't need a liar myself (I'll say he don't. Stenog.), living a life above reproach as I do. But even if I did, I wouldn't need to start a mail order business to find them.

I hesitate to say who is the biggest liar in the United States, because of modesty. What I mean is, I don't claim to know everything. But I have my preferences; and I have always admired the liar who draws the railroad maps about as much as any, the way he puts Duluth south of Baltimore and makes it look logical.

According to him, Omaha is east of Memphis, there aren't any mountains, and no rivers to speak of—and, Lordy, how that boy can straighten tracks! There isn't a curve between Chicago and New York or between Seattle and Los Angeles, but, if there isn't, we must have been off the track most of the time the last time I made it.

If a train ran the way he says it does it certainly would tip over a lot of corncribs and other things between here and Philadelphia, because it doesn't seem to turn out for anything, any more than a truck does. And Richmond, Ind., certainly isn't where I left it when I struck out for the big city.

Yes, sir, the girl who retouches the photographs is good, and the man who makes the wash drawings of industrial plants is better, and the guy who draws the clothing ads is better yet, but the railroad map maker has these artists down for the count of 14, or whatever is necessary. He can eliminate Pike's Peak easier than most of us can remove a wart.

In fact about the only truthful men left are those who makes Nye Tools and those who use them. If you use Nye Tools you can tell a man just when the job will be done, they work so much easier and faster than any other. As far as the oil business is concerned, Nye Tools have made prevarication and profanity lost arts.

Truthfully yours,

HARRY G. NYE,

Otherwise Known As

THE NYE TOOL & MACHINE WORKS

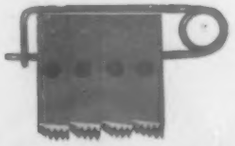
4120-30 Fullerton Avenue

Chicago, Ill.

(Copyright, 1928, by Harry G. Nye. All rights reserved)

The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe Threader, complete ....$9.60 net
West of Rocky Mountains $10.80



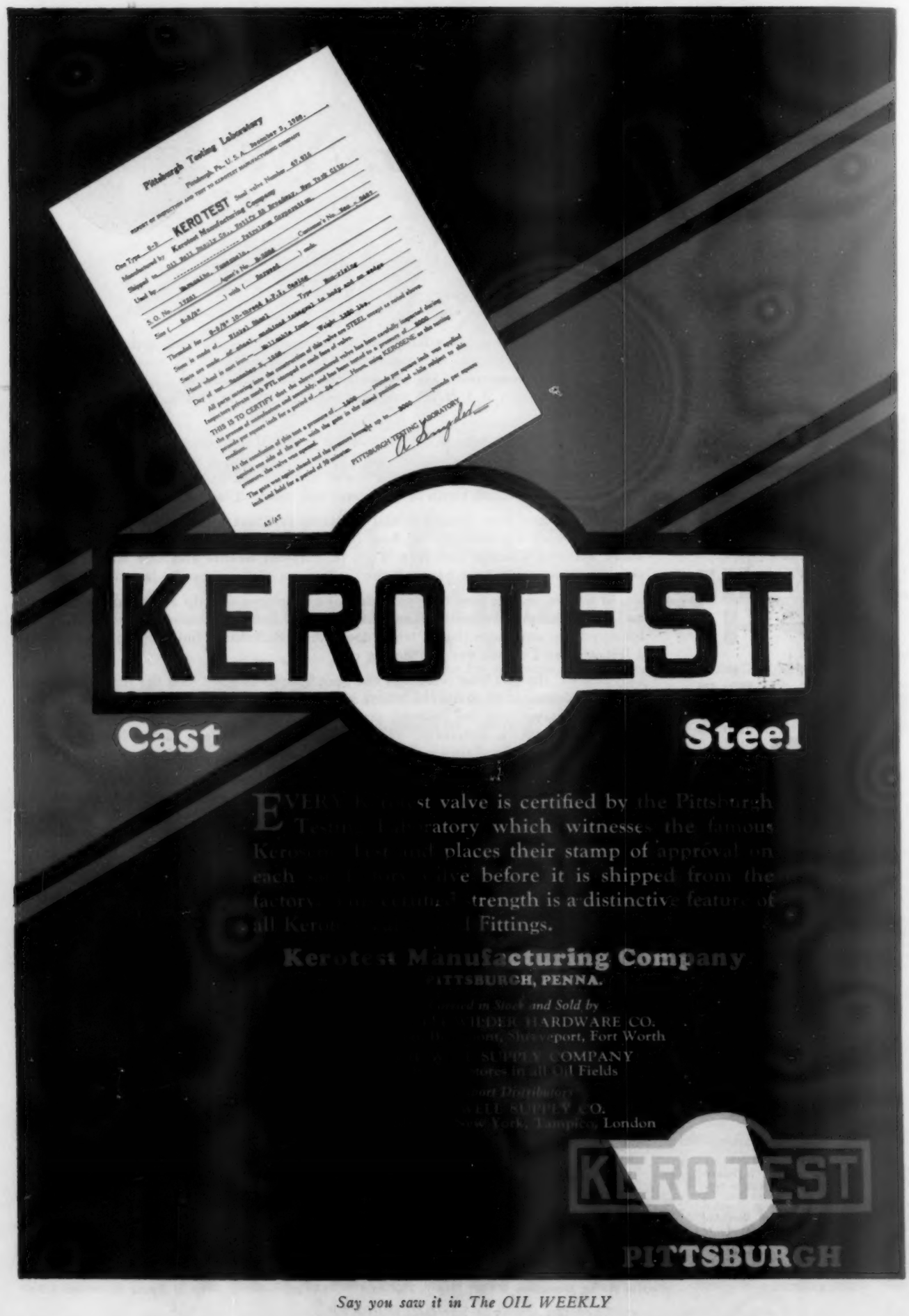
NYE (Toledo Type) Chasers Fit Nos. 1, 1A and 2 NYE (Toledo Type) Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.

No. 1, 1″ to 1½″ ..$ .75 per-set net
No. 1, 2″ .....$1.25 per set net
No. 2, 2½″ to 4″ ..$3.60 per set net

The No. 1A is the same as the No. 1, except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe Threader, complete ...$12.00 net
West of Rocky Mountains $13.50



Say you saw it in The OIL WEEKLY

Haynes Stellite's Biggest Year

HAYNES STELLITE

—is an intrinsically hard cast metal.
—requires no heat treatment.
—has temper that is inherent and permanent.
—is not affected by heat up to 1800° F.
—is tougher at red heat than when it is cold.
—resists abrasion better than any other metal.
—is highly resistant to almost all acids and chemical compounds.
—has the untarnishable qualities of gold and platinum.
—takes a high silver-white polish and retains it.
—is non-magnetic and does not adhere to other metals.

IN 1928 sales of Haynes Stellite broke all records. Old customers bought more Haynes Stellite and more new and important names were added to our list than in any previous year.

Such a year of progress and achievement could only be based on confidence—confidence of users in the product and the helpful service policy fostered in the field by Haynes Stellite Company.

If you are not already a user of Haynes Stellite, may we not have this opportunity of showing you how Haynes Stellite and Haynes Stellite service can assist you in reducing maintenance and production costs?

HAYNES STELLITE COMPANY
Unit of Union Carbide and Carbon Corporation

UCC

DISTRICT SALES OFFICES

Chicago—1949 Peoples Gas Bldg.
Cleveland—628 Keith Building
Detroit—4-240 Gen'l Motors Bldg.
Houston—6119 Harrisburg Blvd.
Los Angeles—1310 Santee Street
New York—30 East 42nd Street
San Francisco—114 Sansome St.
Tulsa—Exchange Nat. Bank Bldg.

General Offices—Kokomo, Indiana

Haynes Stellite welding rod is also available from any of the 28 District Sales Offices of Oxweld Acetylene Company.

Stelliting with

HAYNES STELLITE

Strongest yet Developed

ALL parts of Howe XXS-40 and XXS-1240 Rotary Chains are chrome nickel (heat treated) even the cotter pins. The bushings and pins are press fitted into the side bars.

The alloy steels assure greatest strength and wear values. The press fits increase durability and prevent wracking of parts. Send for full particulars on these new Howe Rotary Chains.

HOWE CHAIN COMPANY, CHAIN SPECIALISTS. MUSKEGON, MICH.

SOLD BY

Republic Supply Company

General Office Houston, Texas

OIL AND GAS WELL SUPPLIES

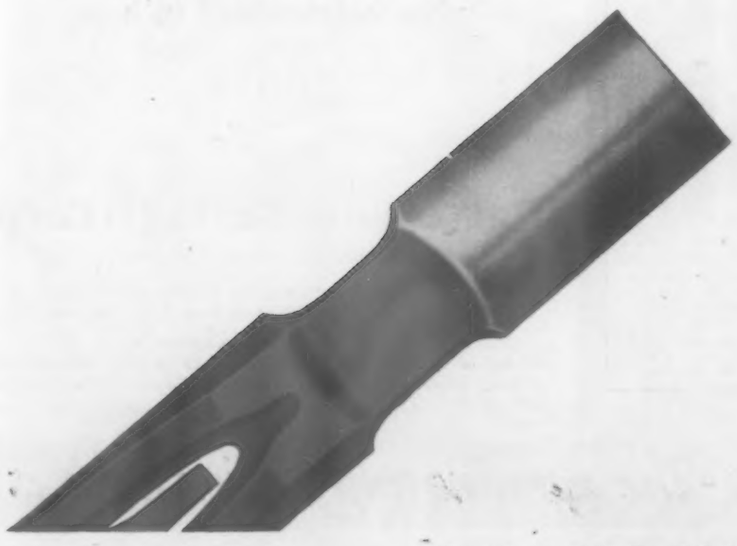
ROTARY AND CABLE TOOLS

Say you saw it in The OIL WEEKLY

WELDLESS JARS

SPANG

The HIGHER STANDARD



Users of Spang (patented) Weldless Jars never worry about jar trouble. There are no welded reins to fail. There have been no welding heats to weaken the material.

Each and every Spang Weldless Jar is drop forged from a single billet of especially tough alloy steel—then scientifically heat treated for maximum strength, service and safety.

Spang Weldless Jars are standard equipment in all fields, domestic and foreign.

Over 300 leading Supply Stores carry Spang Weldless Jars in stock.

SPANG & COMPANY
Butler, Pa.

They have set The fastest pace!

Here are a few Bettis records for 1928

In the 71 wells drilled below 7,000 feet, 69 were Bettis-equipped.

The deepest well drilled in California.

The largest well drilled in California.

The discovery well in the deep sands at Santa Fe Springs.

The discovery well at Oklahoma City.

The discovery well at Kettleman Hills.

The discovery well at Elwood Terrace.

The biggest producers at Santa Fe Springs and Ventura.

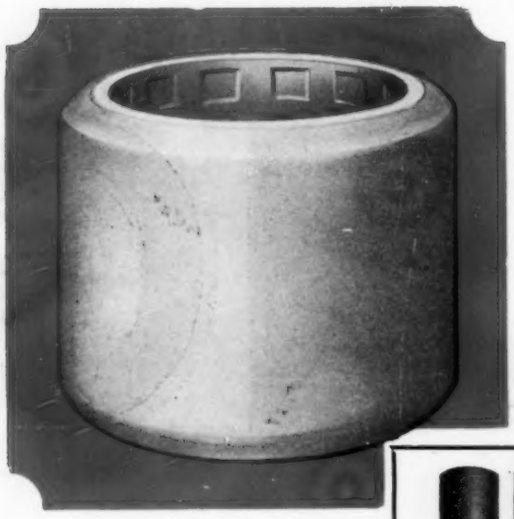
The well in which the longest string of 10″ casing was set. (Over 7,000 feet.)

The fastest drilled well in California.

More than 98,000 Bettis Protectors were installed during the past 12 months and there has never been a complaint of a fishing job or one lost in the hole, to our knowledge.

During the past year practically every deep well has been equipped with Bettis Protectors and there has never been an hour's delay in the delivery of our Product from the factory, or from any of our branches.

One of the largest California oil companies has been using a string of pipe Bettis-equipped for ten months with a service of 6818 hours, and the Protectors are still in service and are good for many additional months.



"Best bet yet"

Fully Protected By Patents

Hopkins Anti-Friction Tool Joints

Bettis Protectors are now available in Hopkins Anti-Friction Tool Joints and Collars which are sold by manufacturers licensed by us. Fully covered by patents.

No Seams . . . . . No Hinges
No Dovetails
No metal added to hole

• • •

Ask for New Catalog

Patterson-Ballagh Corp.
Insurance Exchange Building, Los Angeles, Calif.

Texas and Louisiana Distributors:
Bettis Sales Co., 617 Public National Bank Bldg., Houston, Texas

New York Office: 39 Cortlandt St.
Carried in stock at—Los Angeles, Santa Fe Springs, Ventura, Long Beach, Coalinga, Bakersfield, Houston, Wink and New York City

Bettis Protectors - The genuine anti-friction Rubbers

WHEREVER WHEELS AND SHAFTS TURN

Industry's profile cuts the sky—express trains glide by—traffic whistles shriek, sirens snort, bells clang. In the thick of industry and transportation are Timken Bearings in railroad and street car journals, electric motors, buses, trucks, motor cars and machinery of all kinds—saving lubricant, reducing friction, and prolonging machine life.

Where roads are to be made, rivers bridged—where men mine the earth or use its soil for growing grain or pierce it deep to tap the oil supply—there again are Timken Bearings and Timken benefits.

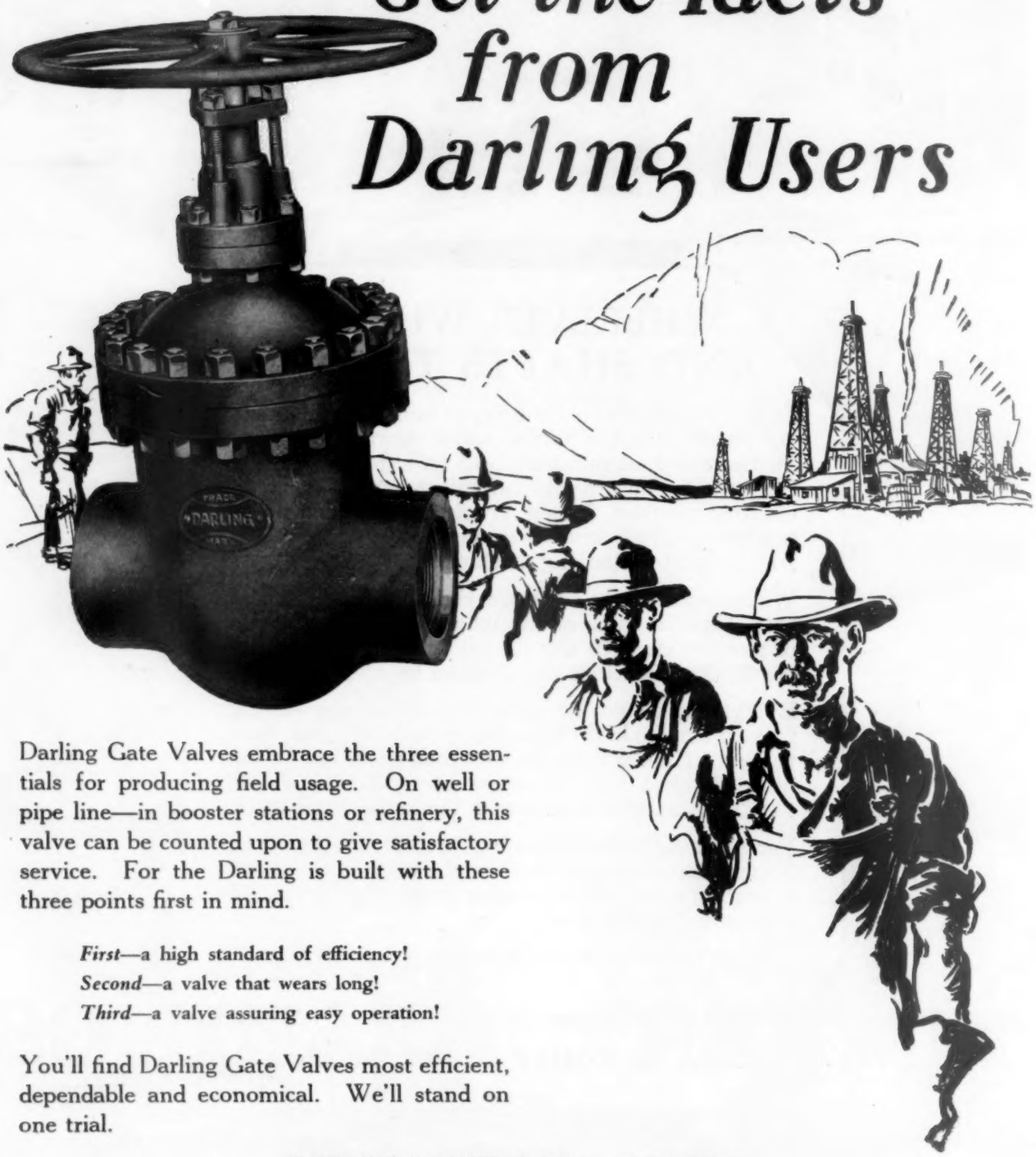
Everything we eat or wear, buy, sell or use—every move we make in transporting people or products—there are Timken Bearings with their exclusively combined Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken electric steel.

For wherever power is applied through moving parts, Timken Bearings are bettering the work of the world—cutting costs and increasing production wherever wheels and shafts turn.

THE TIMKEN ROLLER BEARING COMPANY
C A N T O N , O H I O

TIMKEN *Tapered Roller* **BEARINGS**

Get the facts from Darling Users



Darling Gate Valves embrace the three essentials for producing field usage. On well or pipe line—in booster stations or refinery, this valve can be counted upon to give satisfactory service. For the Darling is built with these three points first in mind.

First—a high standard of efficiency!
Second—a valve that wears long!
Third—a valve assuring easy operation!

You'll find Darling Gate Valves most efficient, dependable and economical. We'll stand on one trial.

DARLING VALVE & MFG. COMPANY
Williamsport, Pa.

NEW YORK CHICAGO OKLAHOMA CITY HOUSTON

Mid-Continent Distributors:
Frick-Reid Supply Corp. Atlas Supply Co.
International Supply Co. Petroleum Supply Co.
Happy Belting Co.

California Distributor:
Petroleum Equipment Co., Los Angeles

DARLING
GATE VALVES

Say you saw it in The OIL WEEKLY

PIONEERS BOTH!

IN the eighteen-thirties when few men dreamed of political possibilities and those few were burlesqued, Abraham Lincoln sat by the open fire-place in the log cabin of his father and studied by the light of flickering flames. Little more than a score of years later, Lincoln, pioneer of a new empire, reached the pinnacle of political ambitions and created for himself an immortal place in the minds of generations to come.

EIGHTEEN years ago when the oil industry was yet young in the Gulf Coast Country, Norvell-Wilder established a company to supply the needs of the oil men in the field. There were some who looked askance. Pioneers have always been subjected to such. Today with the potential possibilities of this region yet untouched, Norvell-Wilder has already established the reputation of dependability and service in supplying the oil field trade.

TOMORROW'S success comes from preparation today. Let a firm which has pioneered with the industry advise with you and aid your organization in selecting the right equipment and tools. Be assured they will be delivered when promised — ON TIME.

Whether you are located in the foreign fields or in America. . . . . Whether your needs be immediate or remote . . . drop us a line setting forth your problem. No obligation.

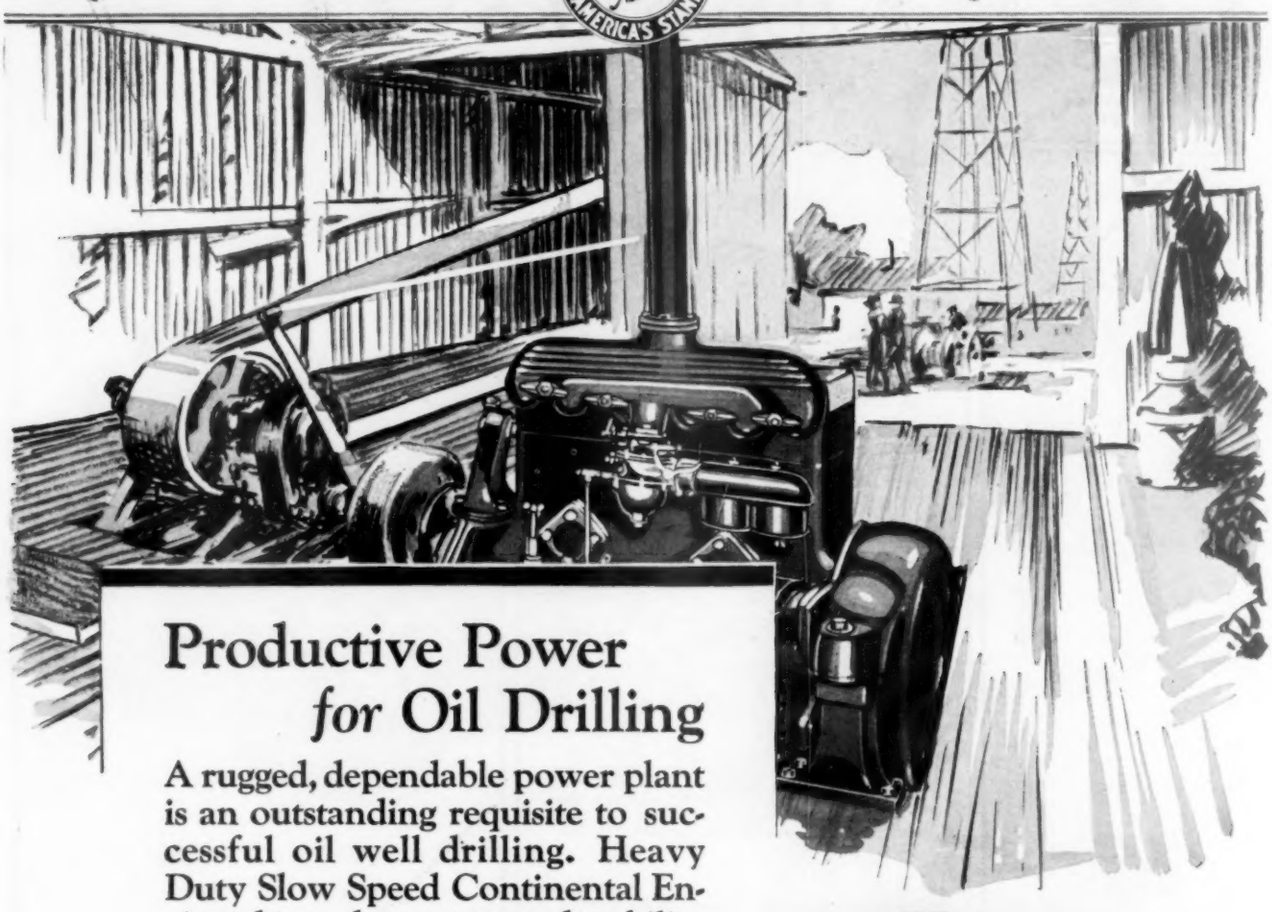
NORVELL WILDER HARD-WARE CO. QUALITY AND SERVICE

NORVELL WILDER HARDWARE CO.

BEAUMONT HOUSTON SHREVEPORT FT. WORTH

Dependable Power for Every Purpose

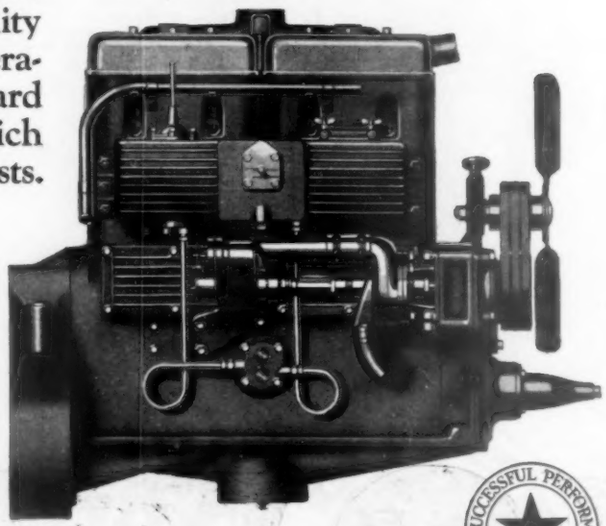
CONTINENTAL MOTORS — Powerful as the Nation — AMERICA'S STANDARD



Productive Power *for* Oil Drilling

A rugged, dependable power plant is an outstanding requisite to successful oil well drilling. Heavy Duty Slow Speed Continental Engines have the power and stability so necessary in all oil field operations. They stand the gaff in hard drilling with a dependability which speeds up production and cuts costs.

Many added refinements, the result of Continental's extensive experience in gasoline engine design, insure unusual power capacity and longer motor life.



CONTINENTAL MOTORS CORPORATION
INDUSTRIAL EQUIPMENT DIVISION
Office and Factory: Muskegon, Michigan
The Largest Exclusive Motor Manufacturer in the World

FOR SUCCESSFUL PERFORMANCE · A.G.C.-A.

Continental Engines

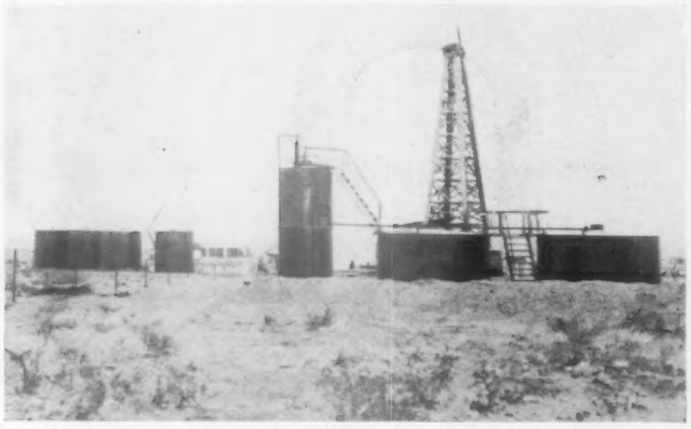
Say you saw it in The OIL WEEKLY

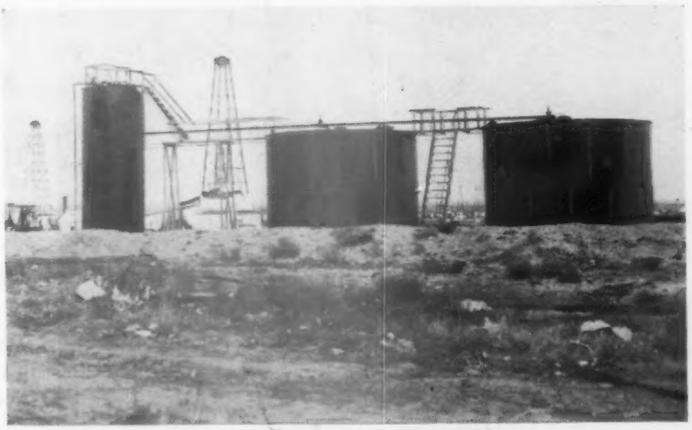
BUTLER BOLTED TANKS AND BUTLER PRESSURE TANKS *in Best, Texas*

LIKE all Butler Bolted Tanks those pictured here are assembled from larger than the ordinary run of bolted tank sheets. Hence, there are fewer seams per tank—fewer operations in erection. Bolt holes are uniform as to size and spacing. Huge machines place them in each sheet at one stroke. No chance for variation in template, one sheet compared to another or one side of a sheet compared to the other side. They positively match any other sheet formed for the same size Butler Tank.

Man-sized clean out openings, two feet by four feet are standard on Butler Bolted Tanks. And the bolts are removable from the outside.

The pressure tanks of the batteries pictured are Butler Vapor Pressure bolted. Sizes 14′ 11″ in diameter and smaller withstand a pressure of 2 pounds and a vacuum of 4 ounces. Butler Welded Vapor Pressure Tanks are recommended for more difficult pressure conditions.





"Butler Oil Field Tanks" is a catalog about bolted Tanks up to 25,000 barrels capacity and welded tanks made to any specifications. A copy was printed for your use.

BUTLER MANUFACTURING COMPANY

KANSAS CITY, MO. **MINNEAPOLIS, MINN.**

Butler Products include: READY-MADE Steel Buildings, Cans, Funnels, Buckets, Measuring Pumps, Truck Tanks, Underground Tanks, Storage Tanks, Bolted Tanks, Etc. Pipe that can be used as conduit, double well casing or for other purposes.

These reliable dealers are ready to render speedy Butler Bolted Tank service.

M & V Tank Co., at Wichita Falls, Olney, Nocona, Cross Plains, Albany, Cisco, Isom and Brownwood, Texas.

Drane-Humphrey Co., at San Angelo, Big Lake, Pyote and McCamey, Texas and Roswell, New Mexico.

Drane Tank Co., at Tulsa, Holdenville, Seminole, Hallett and Shawnee, Oklahoma; El Dorado and Madison, Kansas.

M. A. Trimmer at Blackwell, Oklahoma, and Oxford, Kansas.

Keyes-Butler Tank Co., at Casper and Cody, Wyoming.

Thomas Moran at Oil City, Shreveport and Georgetown, Louisiana; Muskegon, Michigan.

"OILWELL" HOOKS

"Oilwell" Safety Sucker Rod Hook

FAST STRONG SAFE

This hook is heavy enough to handle the longest string of sucker rods. It is perfectly balanced and has few parts.

The automatic locking device cannot open until released by hand pressure on the latch mechanism located in the handle.

The handle on the back of the hook, provides a good gripping device and protects hands from accidental injury.

Oilwell Sucker Rod Hooks are heat treated.

919

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Say you saw it in The OIL WEEKLY

FEB 11 ©CIB 30193

Volume 52, No. 8 *February 8, 1929*

The OIL WEEKLY

A GULF PUBLISHING COMPANY PUBLICATION

TABLE OF CONTENTS PAGE 43 ADVERTISERS' INDEX LAST PAGE

Report *Proposes* Oil Policy *Changes* in Trinidad

Exclusion of aliens from Crown lands to continue despite contrary local attitude

By ROY E. LEIGH

Special Foreign Staff Representative

SAN FERNANDO, Trinidad, B. W. I.—The oil policy and mining laws of the Trinidad government (British West Indies) are to be reviewed and, perhaps, revised at the next meeting of the Legislative Council, scheduled to convene in March. This law-making body will have before it for consideration a comprehensive report on the oil industry of Trinidad (Council Paper No. 86 of 1928), by Sir Thomas H. Holland, K. C. S. I., K. C. I. E., F. R. S., Director of the Imperial College of Science and Technology, and ex-president of the Institute of Petroleum Technologists and Mining Engineers, etc., who was sent out by the Colonial office to make an investigation early last year.

Inasmuch as Sir Thomas found it necessary in several instances to criticize indirectly the former policy of the Trinidad government, the authorship of which is credited in a large measure to Sir John Cadman, now managing director of the Anglo-Persian Oil Company, who served as inspector of mines and/or expert advisor on petroleum matters to the Trinidad government during the period 1904 to 1921, an unusual amount of interest is attached to his report. It is expected that Sir John's local friends may take up cudgels in defense of his policies. The present inspector of mines, Hon. A. P. Catherall, may also be moved to enter the forum in defense of his office, the abolition or curtailment of which Sir Thomas strongly advocates. Land- and royalty-owners will doubtless be represented in the council chamber in opposition to Holland's suggestion that they be taxed 2⅛ per cent. of the value of oil produced from their properties (i.e., one-fourth the usual royalty income of 10 per cent.), and 25 per cent of rental income.

Curiously enough, it so happens that this proposed special tax would apply to greater extent to freehold lands to which the operations of American oil companies are restricted, and to lesser extent to lands operated by British companies, which consist chiefly of Crown lands exempt from such taxation.

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"2. The problems referred to me for investigation included:

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(2) the taxation of oil; etc., etc.

It is generally believed that the invasion of this British oil field by American interests in 1926 and 1927 created an unusual situation, which so alarmed the local and home governments that they thought it necessary to send out an English expert to study ways and means of curbing the activities of the alien "invaders."

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Volume 52, No. 8 *February 8, 1929*

The OIL WEEKLY

A GULF PUBLISHING COMPANY PUBLICATION

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Report *Proposes* Oil Policy *Changes* in Trinidad

Exclusion of aliens from Crown lands to continue despite contrary local attitude

By ROY E. LEIGH

Special Foreign Staff Representative

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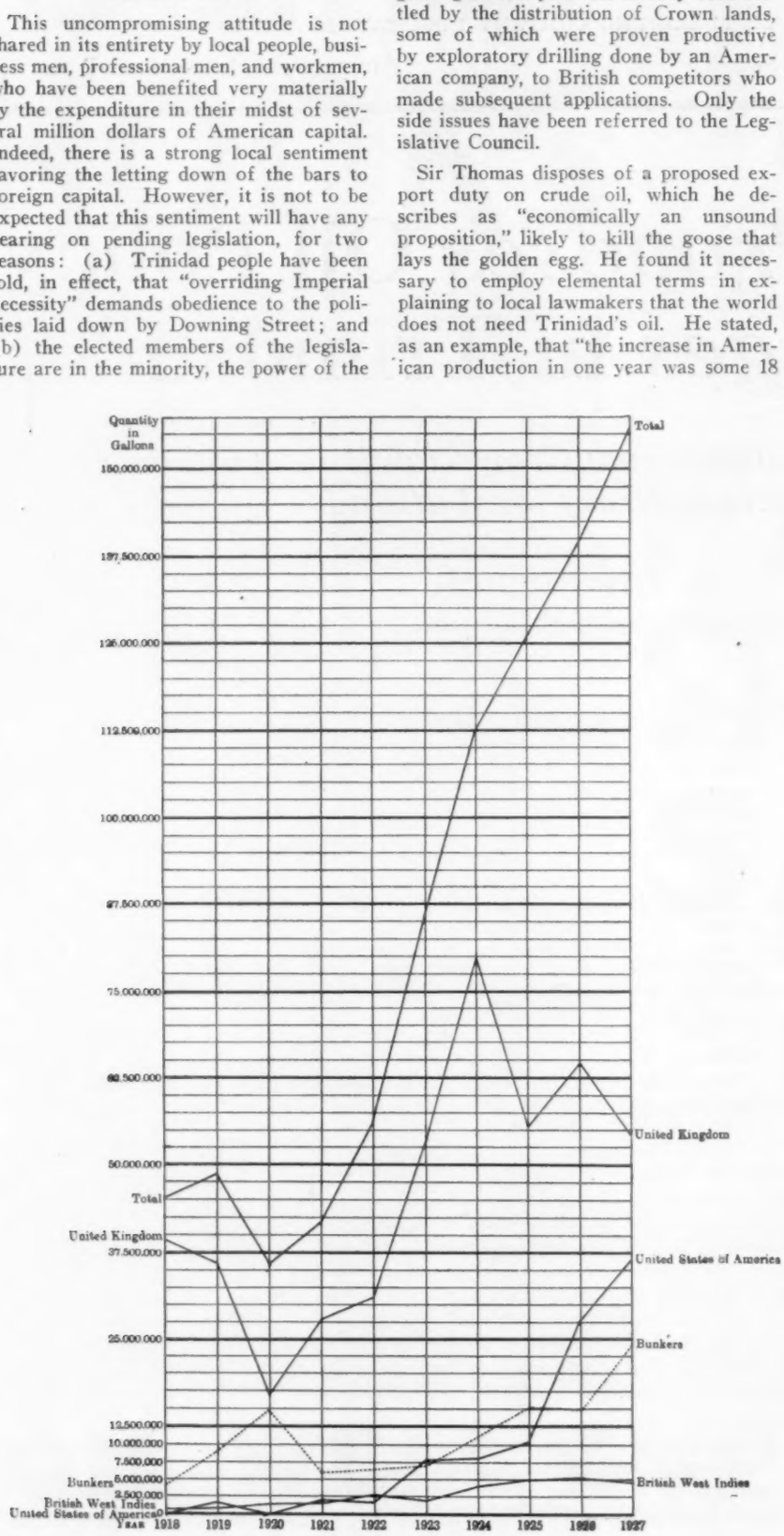
necessity, had been pushed to its logical issue and had been imposed on private as well as Crown oil-lands, the advantages to the general welfare of the Colony would have been more definitely marked."

Local Attitude

This uncompromising attitude is not shared in its entirety by local people, business men, professional men, and workmen, who have been benefited very materially by the expenditure in their midst of several million dollars of American capital. Indeed, there is a strong local sentiment favoring the letting down of the bars to foreign capital. However, it is not to be expected that this sentiment will have any bearing on pending legislation, for two reasons: (a) Trinidad people have been told, in effect, that "overriding Imperial necessity" demands obedience to the policies laid down by Downing Street; and (b) the elected members of the legislature are in the minority, the power of the majority being always held by the "official" or appointed members, sent out from England, who usually vote *en bloc* on matters outlined by governmental policy. In fact, the main issue which confronted the two governments at the beginning of last year has already been settled by the distribution of Crown lands, some of which were proven productive by exploratory drilling done by an American company, to British competitors who made subsequent applications. Only the side issues have been referred to the Legislative Council.

Sir Thomas disposes of a proposed export duty on crude oil, which he describes as "economically an unsound proposition," likely to kill the goose that lays the golden egg. He found it necessary to employ elemental terms in explaining to local lawmakers that the world does not need Trinidad's oil. He stated, as an example, that "the increase in American production in one year was some 18 times the total output of Trinidad," disregarding production shut in.



Exports of oil from Trinidad, from government report

Tariff Repeal

This long-headed statesman goes even further and advocates the repeal of the import tariff on crude oil—10 per cent. and upward, *ad valorem*. In paragraph 184 of his report, he says, "One of the most important circumstances to consider in this respect is the influence of a proved stability of fiscal policy. In the Central American region there is already a striking example of the way in which commercial investors are affected by considerations of political stability in selecting a site for refinery works. Trinidad has an opportunity now of showing that it is a safe area for the investment of capital in refinery plants to handle prospective supplies being developed in the Central American region." It has been suggested that he may also have in mind the newly-discovered oil fields of Eastern Venezuela, just across the Gulf of Paria from Trinidad; and that his bid is that, like Curacao and Aruba, Dutch islands on which is refined a considerable quantity of oil produced in the Maracaibo District of Venezuela, Trinidad offers a stable base for the refining of oil produced elsewhere.

One is impressed with the thoroughness of Sir Thomas' comprehension of the situation which obtains in the oil fields of Trinidad. In order to get the point of view, an American undertaking to study the Holland report should first read a short article by Wallace E. Pratt, published in the November, 1928, issue of *Mining and Metallurgy*, under the title "Oil-Minded Albion." Pratt visualizes the obstacles which would confront oil operators in the "tight little isle;" and suggests that perhaps the greatest of the "insuperable difficulties" which lie in the way of the development of a domestic crude supply by the English people is found in their national temperament—a capacity for stumbling over details.

Lease Limitations

The same conditions which the eminent American geologist jokingly portrays with respect to England actually exist in Trinidad, and are the subject of the prominent Englishman's most solemn scrutiny. In paragraph 97, Section IV, he says, ". . . . expression was given to what appears to be, from the evidence that I have obtained, a prevalent impression in Trinidad, namely, that oil working displaces and in other ways injures the staple agricultural and planting industries." In the succeeding paragraph, he discusses "more extreme assertions made to the effect that, in displacing locally the planting industry, the development of the oilfields is economically a drawback rather than an advantage to the colony." Elsewhere, he says, "I have received a variety of complaints from small land owners. . ."

"On the other hand, the oil companies complain there is no clearly defined procedure for entering alienated lands, and that existing law does not permit of claiming wayleave over adjoining land to work a license or lease, distinguished legal

authorities agreeing also that, whilst it is possible to do all that is necessary to win crude oil under lease, the present law gives no right to put up a refinery or other necessary works, even labour quarters, on the land leased." He might have gone further by saying that, in many instances, lessees are prohibited by the inadequacy of rights and liberties granted in early oil mining leases from operating one property conjointly with adjoining tracts, as, for example, is often done in the operation of central powers.

In paragraph 9, Sir Thomas explains that oil rights under all lands alienated since January 17, 1902, have been reserved to the Crown; prior to that date, the advisability of such reservations had not been realized. Naively, he suggests that "the landowner is now reaping an unexpected harvest when royalty is paid to him, whilst the oil companies have generally made good bargains in . . ." (those instances where the landowner's rights have been purchased outright). Probably anticipating criticism of his proposal to tax royalties and rentals, Sir Thomas says, in paragraph 106, "It is sometimes argued that it would be inequitable for the Government to tax oil which is private property, but this proposition is open to challenge. Very little was known here in 1902 (!), and most, if not all, of those who purchased their land before that date were not conscious of purchasing any minerals with their lands." He also anticipates that "There may be differences of opinion about the equity of using legislative powers in this way to recover a portion of the mineral rights which were given away through oversight with the land before 1902 . . . ."

Land-owners, planters, and royalty-owners are up in arms, and charges of "confiscation," "socialism," and "bolshevism" may be heard. One local owner of royalties and mineral rights suggested that Sir Thomas can be confounded with his own phrases: "unfair use of governmental powers," "not in the public interest to inhibit the development of any natural resource," "an invasion of private rights, etc."

Operating Costs

Sir Thomas made a study of operating costs in Trinidad, and found that lifting costs approximate 57 cents per barrel, while the average cost of drilling is very nearly $20 per foot. He then struck a balance for the year 1927 and found that the industry probably lost around $1,822,314, as follows:

RECEIPTS

5,380,178 barrels at $1.20... $6,456,214

CAPTAIN JAS. A. GOODWIN

Attorney and General Manager, British Controlled Oilfields, Ltd., San Fernando, Trinidad, B. W. I.

EXPENSES

Production: 5,380,178 barrels at 57 cents	$3,066,701
Drilling: 240,107 ft at $20.	4,802,140
Royalty	409,687
	$8,278,528
Loss on field operations....	$1,822,314

Sir Thomas considers the custom of the Trinidad government in imposing footage-tonnage obligations (*i. e.*, the duty of drilling certain amounts of hole each year or, in the alternative, of producing an arbitrary tonnage of oil), and suspects that it is conducive of the practice of "burying pipe," merely for the fulfillment of such obligations, and/or the production of oil at unremunerative prices. Very wisely, therefore, he "recommends that these two obligations—be omitted from all future leases, and that the minimum dead-rent be relied on as a sufficient and fair spur to development."

His recommendations are as follows:

Summary of Recommendations

"In this Section a summary is given in the briefest form of the special recommendations that seem to be justified by the results of this investigation. These recommendations are given in the order in which they arise in the body of the report; and in the paragraphs which are cited will be found a fuller discussion of the considerations on which the recommendations are based.

"(1) *Period of Lease.* It is proposed to grant leases in future for periods not exceeding 21 years, renewable for similar periods, and the terms might suitably be published as a rule in the following form:

> "'The term for which an old-mining lease may be granted shall not exceed 21 years, but the lease may contain a clause permitting renewal for a period not exceeding 21 years, on a dead-rent and surface rent not exceeding twice the original dead and surface rent respectively, the royalty payable being that which is, during the currency of the lease, in force under the orders of the Governor.'

"(2) Instead of comprehensive leases covering isolated blocks, separate leases might be granted for conveniently small blocks of land, each carrying the full obligations of dead-rent and the privileges of relinquishment and renewal.

"(3) When the new large-scale maps are available, blocks of Crown and alienated lands (as nearly as convenient about one square mile in area) should be marked out, with a view of granting separate leases for each, whether for new or for revised old leases.

"(4) In consequence of the intricate association of Crown and private lands, it might be necessary occasionally to grant leases for blocks less than one square mile in area; but, to limit applications for undesirably small blocks, it may be desirable, in addition to the minimum dead-rent per acre, to prescribe a minimum dead-rent of £250 for each lease.

"(5) There is no necessity in Trinidad to prescribe maximum limits of areas to be held by a single company. The dead-rent prescribed for each block will act as a sufficient check on extravagant demands, and it is not likely that any company will in future find land which is suitable and available for unusually large holdings.

"(6) The minimum annual royalty, or dead-rent, is the most important of all obligations in a lease. The rate per acre so demanded of a lessee should be varied from about five shillings in undeveloped areas to a maximum of 20 shillings in accessible lands of proved value. The institution of a relatively light dead-rent for a prospecting license, or during the first three to five years of a lease is recommended. The rate fixed should be suitable to the plot of land leased, and should have no regard to the total area leased by any company.

"(7) If a suitable dead-rent be charged, the drilling and output obligations prescribed in the modern model license and lease will be unnecessary, and might be abolished.

"(8) The rate of royalty on output

applicable to all new leases, should be fixed by government order for triennial periods and should be, as a cash equivalent, approximately 10 per cent. of the average local value of crude oil during the preceding triennium.

"(9) Only oil or oil-products actually used for drilling operations in the field should be exempted from royalty.

"(10) The suggested charge of an export duty on oil—crude or refined—is economically an unsound proposition, which is unlikely to yield any substantial or annually uniform amount of revenue. Any substantial tax would curtail exports and so affect very seriously the industry of refining, which, on the contrary, should be supported by a consistent policy, as it justifies and makes possible financially the expensive field operations of exploitation. With an assured stability of conditions, Trinidad promises to absorb for refining, some of the crude oil produced under less stable political conditions in the Central American region, and a definite statement of policy is thus desirable.

"(11) It is suggested that landowners holding pre-1902 grants, and therefore oil companies who have bought their freeholds, should pay royalty on a scale approximately equivalent to 2½ per cent. of the value of the crude oil produced on their lands, or alternatively one quarter of the rents paid by oil companies to landowners for the express right to work oil.

"(12) Additional statutory powers are necessary, and a procedure should be defined, to enable holders of prospecting licenses and mining leases to obtain the necessary wayleaves, and to erect the required accessory works to develop Crown oil under lands alienated since 1902. It is suggested that the system of arbitration on claims for damage done by licensees and lessees who may utilize alienated lands in this way requires amendment by the appointment of two assessors, who have special knowledge of local land values, to assist the judicial arbitrator. The assessors should be nominated only from a panel authorized by the governor.

"(13) As regards procedure, it is suggested that when a license or a lease to work oil has been granted, an allowance in time, not exceeding six months, should be granted to enable the concessionaire to make with the landowners private agreements for scales of compensation, before appealing to arbitration. Within three months afterwards the concessionaire should have the right of entry after providing for the payment of damages according to the award of the arbitrator (para. 150).

"(14) The title of the Oilfield Water Inspector, now stationed at San Fernando, should be changed to that of Government Petroleum Technologist. He should be provided with a Deputy Technologist and suitable office staff. For the proper exercise of his duties of inspection and control, he should be granted statutory powers, thereby removing the necessity for duplicating reports and instructions through the Inspector of Mines. With the Petroleum Technologist there should be associated a Petroleum (Conservation) Board, with advisory functions and with power, if necessary, to refer questions for the decision of the governor. It is recommended that powers be taken by legislation to levy a cess of one cent per barrel of oil produced, and one cent per foot drilled on all private as well as Crown lands, the funds so obtained being reserved to meet in part the cost of the Petroleum Technologist's office.

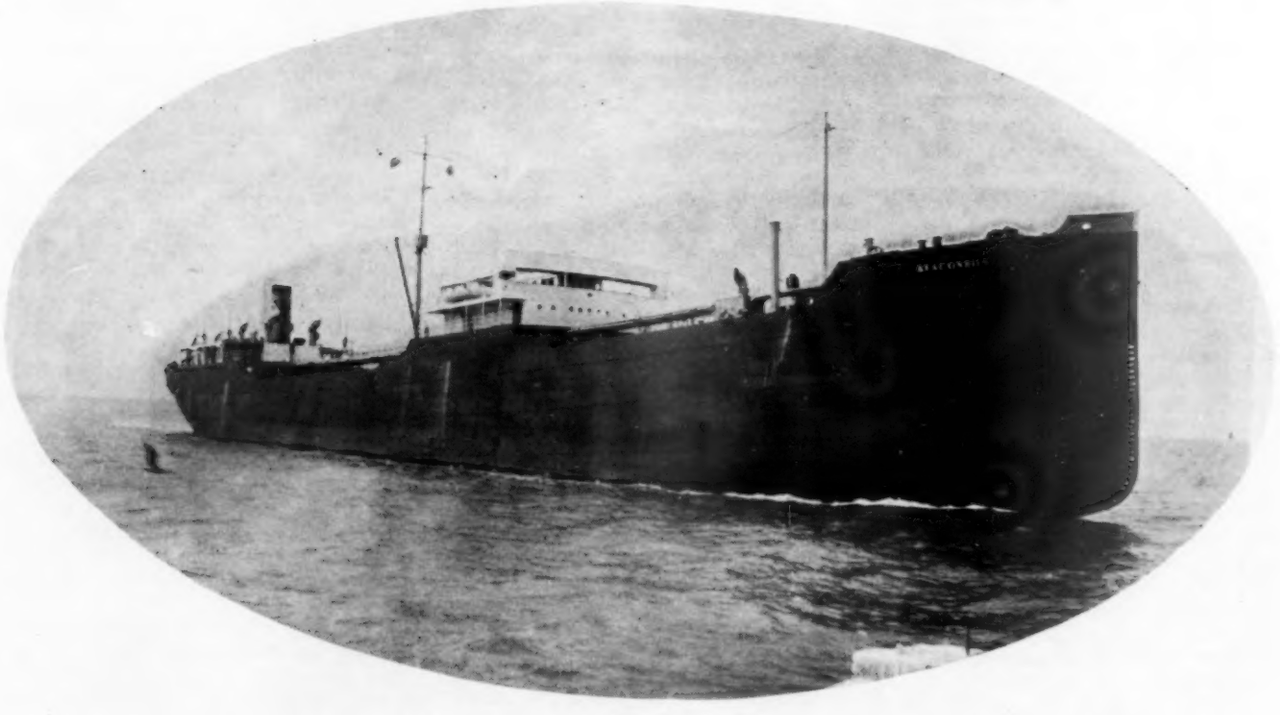
"(15) It is desirable to restore the office of Director of Lands, Mines and Surveys for the general control of a natural group of related government activities.

"(16) On the re-establishment of the office, the functions now exercised by the Inspector of Mines can be distributed among the appropriate government departments and the proposed petroleum technologist.

"(17) It is advisable to admit crude oil free of import tariff, and, with a view of establishing the oil-refining industry, to declare this to be part of the settled policy of government.

"(18) It is not necessary to fill the vacant office of Government Geologist if that of Petroleum Technologist be established on a permanent basis.

"(19) After consideration of the questions of policy recommended in this report, it will be desirable to frame and publish, for the information of investors, a code of rules defining the conditions under which prospecting licenses and mining leases may be obtained and worked. Special conditions for exploration licenses are no longer necessary."



Tanker "Beaconhill," owned by Beacon Oil Company, Boston, arriving at Sobo, Trinidad

Distillation Test *How to Make It* *on* Crude Petroleum

By H. L. KAUFFMAN
Petroleum Consultant

AT the present time a great proportion of our crude oil is evaluated by producers on the basis of gravity. This is a very "rough" means at the best of ascertaining the real value of the oil. In the majority of instances, knowledge as to the percentage of naphtha (gasoline and other "light" products) contained therein is a better indication of the worth of a particular crude petroleum. Realizing this, Committee D-2 on Petroleum Products and Lubricants of the American Society for Testing Materials has "drawn up," as a tentative standard of the society, a method of test for distillation of crude petroleum. The method is intended for determining the percentages and distillation range of the naphtha in any crude oil of the class commercially known as refinable crudes. The method does not attempt to specify what quality of product shall be defined as naphtha nor can it be expected to duplicate the results of commercial refining operations. However, it does define apparatus and procedure, leaving selection of numerical limits and interpretation of results to be agreed upon by the interested parties.

Apparatus Required

Among the essential apparatus required for conducting the test are to be mentioned the following:

Flask.
Fractionating column.
Thermometer.
Condenser.
Shield and support.
Gas burner or electric heater.
Measuring graduates and pipettes.

Flask. The distillation flask should be a 300-cc. Hempel distilling flask, Figure 1, the dimensions and permissible variations being as follows:

	CM.	Permissible Variations Inches	CM.
Diameter of bulb, outside	10.2	4.0	0.2
Diameter of neck, outside	2.9	1.125	0.1
Length of neck	25.4	10.0	0.4
Distance, top of neck to center of vapor tube	6.4	2.5	0.3
Length of vapor tube	17.2	6.75	0.5
Diameter of vapor tube, outside	0.8	0.3125	0.1

The vapor tube should be set at an angle of 80 degrees with the neck of the flask, subject to a permissible variation of plus or minus 5 degrees.

Fractionating Column.—The fractionating column (see a, Fig. 2) should be made of a length of No. 18 iron jack chain, enough to pack under its own weight into a column 2.54 cm. one inch in diameter and 17.51 cm. (6½ inches) in length. It may conveniently be "strung" on a loop of wire so that it hangs in loops about two feet in length, which makes the chain more convenient to handle than when it is not looped to gether. The device used for supporting the column (see b, Figure 2) should be made of a suitable length of wire, preferably, though not necessarily of nickel-chromium, about No. 18 gage. One end should be wound in a spiral a little less than one inch in diameter, and the remaining should be bent at right angles to the plane of the spiral and cut off at a length of about 9½ inches. A small loop should be bent into the end away from the spiral and put through a hole drilled in a strip or spring steel (see c, Figure 2) or other suitable material about 0.015 of an inch in thickness, 3/8 of an inch in width, and three inches in length, bent around a cylinder one inch in diameter. When allowed to expand this spring strip should hold firmly on the inside of the neck of the flask and provide a secure support for the column of chain.

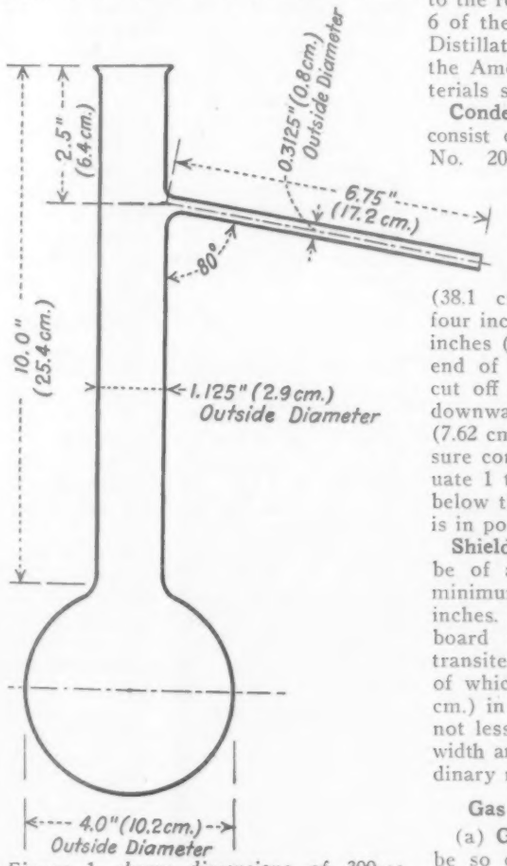


Figure 1 shows dimensions of 300-cc Hempel flask used in A. S. T. M. Tentative Method for Distillation of crude petroleum

Thermometer. The A. S. T. M. Low-Distillation Thermometer, conforming to the requirements specified in Section 6 of the Standard Method of Test for Distillation of Natural Gas Gasoline of the American Society for Testing Materials should be used.

Condenser. The condenser should consist of a 9/16-inch (14.29-mm.) OD No. 20 Stubbs Gage seamless brass tube, 22 inches (55.88 cm) in length. It should be set at an angle of 80 degrees from the perpendicular and surrounded with a cooling bath 15 inches (38.1 cm.) in length, approximately four inches (10.16 cm.) in width, by six inches (15.24 cm.) in height. The lower end of the condenser tube should be cut off at an acute angle, and curved downward for a length of three inches (7.62 cm.) and slightly backward to insure contact with the wall of the graduate 1 to 1¼ inches (2.54 to 3.18 cm.) below the top of the graduate when it is in position to receive the distillate.

Shield and Support. The shield should be of any cenvenient type having a minimum horizontal dimension of six inches. The flask should rest on a board of one-fourth inch (0.64-cm.) transite or hard asbestos, in the center of which is cut a hole 3½ inches (8.9 cm.) in diameter. The board should be not less than six inches (15.24 cm.) in width and should be supported by an ordinary ring stand.

Gas Burner or Electric Heater

(a) **Gas Burner.** The burner should be so constructed that sufficient heat can be obtained to distill the product at the uniform rate specified below. The flame should never be so large that

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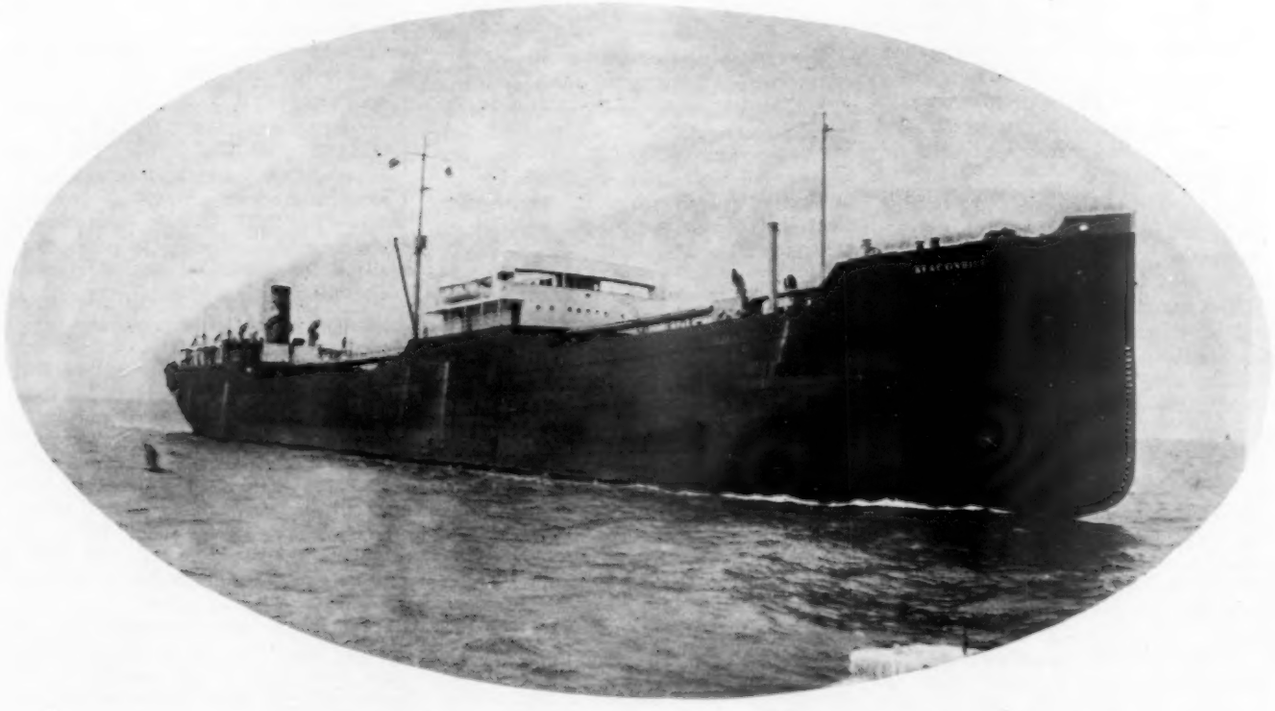

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By H. L. KAUFFMAN
Petroleum Consultant

AT the present time a great proportion of our crude oil is evaluated by producers on the basis of gravity. This is a very "rough" means at the best of ascertaining the real value of the oil. In the majority of instances, knowledge as to the percentage of naphtha (gasoline and other "light" products) contained therein is a better indication of the worth of a particular crude petroleum. Realizing this, Committee D-2 on Petroleum Products and Lubricants of the American Society for Testing Materials has "drawn up," as a tentative standard of the society, a method of test for distillation of crude petroleum. The method is intended for determining the percentages and distillation range of the naphtha in any crude oil of the class commercially known as refinable crudes. The method does not attempt to specify what quality of product shall be defined as naphtha nor can it be expected to duplicate the results of commercial refining operations. However, it does define apparatus and procedure, leaving selection of numerical limits and interpretation of results to be agreed upon by the interested parties.

Apparatus Required

Among the essential apparatus required for conducting the test are to be mentioned the following:

Flask.
Fractionating column.
Thermometer.
Condenser.
Shield and support.
Gas burner or electric heater.
Measuring graduates and pipettes.

Flask. The distillation flask should be a 300-cc. Hempel distilling flask, Figure 1, the dimensions and permissible variations being as follows:

	CM.	Permissible Variations Inches	CM.
Diameter of bulb, outside	10.2	4.0	0.2
Diameter of neck, outside	2.9	1.125	0.1
Length of neck	25.4	10.0	0.4
Distance, top of neck to center of vapor tube	6.4	2.5	0.3
Length of vapor tube	17.2	6.75	0.5
Diameter of vapor tube, outside	0.8	0.3125	0.1

The vapor tube should be set at an angle of 80 degrees with the neck of the flask, subject to a permissible variation of plus or minus 5 degrees.

Fractionating Column.—The fractionating column (see a, Fig. 2) should be made of a length of No. 18 iron jack chain, enough to pack under its own weight into a column 2.54 cm. one inch in diameter and 17.51 cm. (6½ inches) in length. It may conveniently be "strung" on a loop of wire so that it hangs in loops about two feet in length, which makes the chain more convenient to handle than when it is not looped to gether. The device used for supporting the column (see b, Figure 2) should be made of a suitable length of wire, preferably, though not necessarily of nickel-chromium, about No. 18 gage. One end should be wound in a spiral a little less than one inch in diameter, and the remaining should be bent at right angles to the plane of the spiral and cut off at a length of about 9½ inches. A small loop should be bent into the end away from the spiral and put through a hole drilled in a strip or spring steel (see c, Figure 2) or other suitable material about 0.015 of an inch in thickness, 3/8 of an inch in width, and three inches in length, bent around a cylinder one inch in diameter. When allowed to expand this spring strip should hold firmly on the inside of the neck of the flask and provide a secure support for the column of chain.

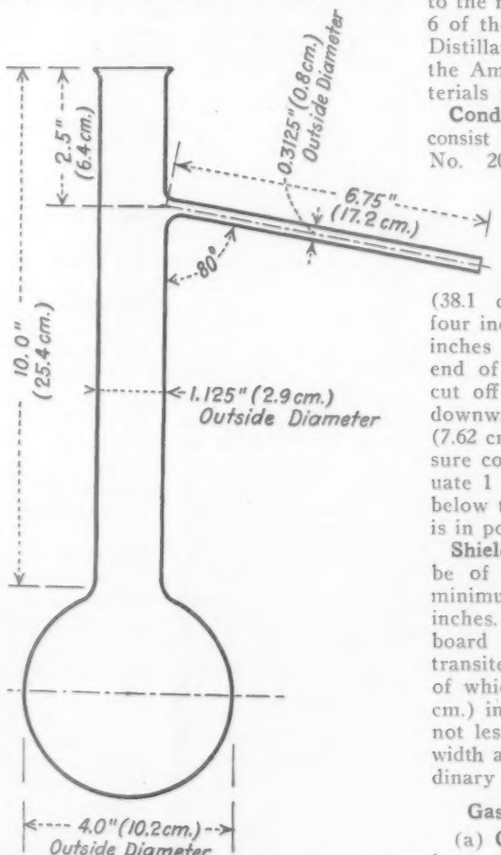


Figure 1 shows dimensions of 300-cc Hempel flask used in A. S. T. M. Tentative Method for Distillation of crude petroleum

Thermometer. The A. S. T. M. Low-Distillation Thermometer, conforming to the requirements specified in Section 6 of the Standard Method of Test for Distillation of Natural Gas Gasoline of the American Society for Testing Materials should be used.

Condenser. The condenser should consist of a 9/16-inch (14.29-mm.) OD No. 20 Stubbs Gage seamless brass tube, 22 inches (55.88 cm) in length. It should be set at an angle of 80 degrees from the perpendicular and surrounded with a cooling bath 15 inches (38.1 cm.) in length, approximately four inches (10.16 cm.) in width, by six inches (15.24 cm.) in height. The lower end of the condenser tube should be cut off at an acute angle, and curved downward for a length of three inches (7.62 cm.) and slightly backward to insure contact with the wall of the graduate 1 to 1¼ inches (2.54 to 3.18 cm.) below the top of the graduate when it is in position to receive the distillate.

Shield and Support. The shield should be of any cenvenient type having a minimum horizontal dimension of six inches. The flask should rest on a board of one-fourth inch (0.64-cm.) transite or hard asbestos, in the center of which is cut a hole 3½ inches (8.9 cm.) in diameter. The board should be not less than six inches (15.24 cm.) in width and should be supported by an ordinary ring stand.

Gas Burner or Electric Heater

(a) **Gas Burner.** The burner should be so constructed that sufficient heat can be obtained to distill the product at the uniform rate specified below. The flame should never be so large that

it spreads over a circle of a diameter greater than five inches (12.7 cm.) on the under surface of the asbestos board. A sensitive regulating valve is a necessary adjunct, as it gives complete control of heating.

(b) **Electric Heater.** The electric heater, which may be used in place of the gas flame, should be capable of maintaining the distillation at the specified rate. The electric heater should be fitted with an asbestos board top one-eighth to one-fourth of an inch (3.18 to 6.35 mm.) in thickness, having a hole 3½ inches (8.9 cm.) in diameter in the center. When an electric heater is employed, the portion of the shield above the asbestos board should be the same as with the gas burner, but the part below the board may be omitted.

Measuring Graduates and Pipettes. Filling charges and distillation fractions should be measured with suitable accurately graduated cylinders or other volumetric glass ware. A special 300-cc. pipette is a convenient device for measuring charges, but an accurate graduate may be used if desired. The regular 100-cc. graduate used in gasoline distillations is reasonably satisfactory for measuring distillation fractions, but a graduate of similar dimensions that can be tightly stoppered is preferable. One can be made by cutting down a standard graduate to remove the lip and then fire polishing.

Procedure

The condenser bath should be filled with cracked ice and sodium chloride or calcium chloride to form a freezing mixture that will cover the condenser tube and maintain a temperature between 0 and 10 degrees F. The condenser tube should be swabbed or cleaned inside to remove any liquid remaining from a previous test. The specific gravity of the oil to be tested should first be determined in accordance with the A. S. T. M. Tentative Method of Test for Gravity of Petroleum and Petroleum Products by Means of the Hydrometer.

A 300-cc. sample of the oil should be measured into the Hempel flask by any suitable means. In case water in the crude oil causes bumping, the sample should be dehydrated by some suitable method, without loss of naphtha, before making the determination. For less viscous oils a pipette or graduate may be used. If the oil is decidedly viscous a sample equivalent to 300-cc. at 60 degrees F. should be weighed into the flask. None of the liquid should be permitted to flow into the vapor tube. The weight in grams of the 300-cc. sample should then be calculated. (The weight in grams of 300 cc. of oil is equivalent to 300 times its specific gravity.)

The supporting device for the fractionating column, Figure 2, should be put in place and the proper quantity of iron chain dropped in carefully so that it fills the space uniformly and without channels. Tapping the flask while the iron chain is being added is helpful, but the column should not be compressed after all the chain is in place.

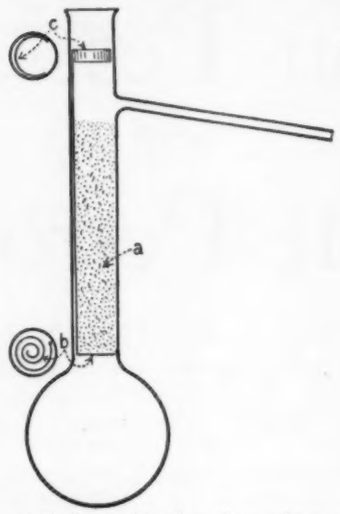


Figure 2 shows fractionating column and supporting device in a Hempel flask

The thermometer, provided with a cork, should be fitted tightly into the flask, so that it will be in the middle of the neck and so that the lower end of the capillary tube is about 1/16 of an inch below the level of the inside of the bottom of the vapor tube at its junction with the neck of the flask.

The charged flask should then be placed in position on the hard asbestos board, which is used with the gas burner or the electric heater, and the flask next connected to the condenser with a carefully fitted cork through which the vapor tube passes. The position of the flask should be adjusted so that the vapor tube extends into the condenser tube not less than one inch (2.54 cm.) nor more than two inches 5.08 cm.).

When the operations described in the foregoing have been completed, a clean dry graduated cylinder should be placed at the outlet of the condenser tube in such a position that the condenser tube will extend at least one inch into the graduate. The graduate should be immersed up to the level of about one inch below the top of the condenser tube in a transparent container of water, maintained at a temperature of from 32 to 40 degrees F. (0 to 4.4 degrees C.) . During the distillation, the top of the graduate should be covered closely with a piece of blotting paper or its equivalent, cut to fit the condenser tube tightly.

When everything is in readiness, heat should be applied. The fractionating column causes some little delay between the time when the liquid starts to boil and the time the vapor enters the condenser. It is therefore permissible to apply heat vigorously until the liquid begins to boil, then to slow down the application of heat so that the distillate begins to come over at a moderate rate. For the first 5 to 10 cc. distilled, the rate should be from 2 to 3 cc. per mintue; thereafter, the rate of distillation should be increased to from 4 to 5 cc. per minute.

When a predetermined temperature is reached, the graduate should be withdrawn from beneath the condenser and the distillation discontinued. The graduate should be tightly stoppered and allowed to stand until all sediment and moisture have settled out and until its contents have reached a temperature of between 55 and 65 degrees F. The total value in the graduate should then be read and recorded as D. The volume of water, if any, should be read and recorded as W. The percentage of naphtha in the crude oil is then calculated from the following formula:

$$\text{Percentage of naphtha equals } \frac{D-W}{300-W} \times 100$$

The whole procedure should be repeated enough times to yield a total volume of distillate of not less than 100 cc.

Naphtha Distillation

The distillate should be poured together (taking care to avoid losses by evaporation and rejecting the layer of water, if present) and should be mixed thoroughly by shaking. A distillation test of the combined distillates should then be made in accordance with the A. S. T. M. Standard Method of Test for Distillation of Gasoline Naphtha, Kerosene and Similar Petroleum Products, except that the initial boiling point should be recorded and the volume of distillate collected in the cylinder should be observed and recorded to the nearest 0.5 cc. when the mercury of the thermometer reaches 212 degrees F. (100 degrees C.), 221 degrees F. (105 degrees C.), 284 degrees F. (140 degrees C.), 392 degrees F. (200 degrees C.) and the end point.

Accuracy

Results of duplicate tests in the crude-oil distillation should not differ from each other by more than 0.5 per cent. In the naphtha distillation, duplicate results obtained for initial boiling point and maximum temperature, respectively, shoud not differ from each other by more than 6 degrees F. (3.33 degrees C.). Duplicate readings of the volume of distillate collected in the cylinder when each of the prescribed temperature points is reached should not differ by more than 2 cc.

Correction for Barometric Pressure

The actual barometric pressure should be ascertained and recorded, but no correction should be made except in case of dispute, when the temperature points should be corrected to 760 mm. (29.92 inches) by the use of the Snyder Young Equation, as follows:

For Centigrade Readings:

$$C_c = 0.00012(760\text{-}P)\ (273+t_c)$$

For Fahrenheit Readings:

$$C_f = 0.00012(760\text{-}P)\ (460+t_f)$$

in which C_c and C_f are, respectively, corrections to be added to the observed temperature t_c or t_f; and P is the barometric pressure in millimeters of mercury.

Criticisms of this tentative method for distillation of crude petroleum are solocited and should be directed to R. P. Anderson, Secretary of Committee D-2 on Petroleum Products and Lubricants, 250 Park Avenue, New York City, N. Y.

Flue Gasses Won't Explode

Tanker Explosions Prevented

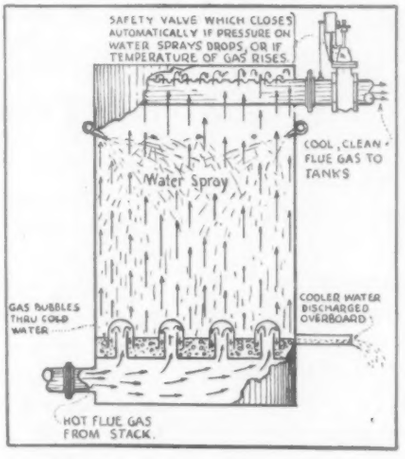
By Excluding Air from Cargo Space

A PLAN for preventing explosions on tankships has been introduced by the Standard Oil Company of California on the tanker H. M. Storey. Unique to the point of being revolutionary, the new method utilizes waste gases from the boiler stack as a protection against the explosion of oil vapors in empty cargo space.

On the face of it the plan appears contradictory, as the waste gases leave the furnace stack at a temperature of approximately 500 degrees Fahrenheit. To send these fumes into the petroleum vapors of tanks that are being emptied of their oil might seem to be inviting disaster, but the process of treatment is believed to make the fumes the ideal thing for introduction into the vapor space of the tanks. The secret lies in the circumstance that the waste gases are cooled by passing through a washer, combined with the fact that all oxygen has been removed from them by boiler-fire combustion. In the absence of oxygen there is no chance for ignition or explosion.

From the boiler stack the gases pass through a pool of cold water and a brisk spray, which cools them and eliminates the possibility that any hot gas or incandescent particles of soot will reach the tanks.

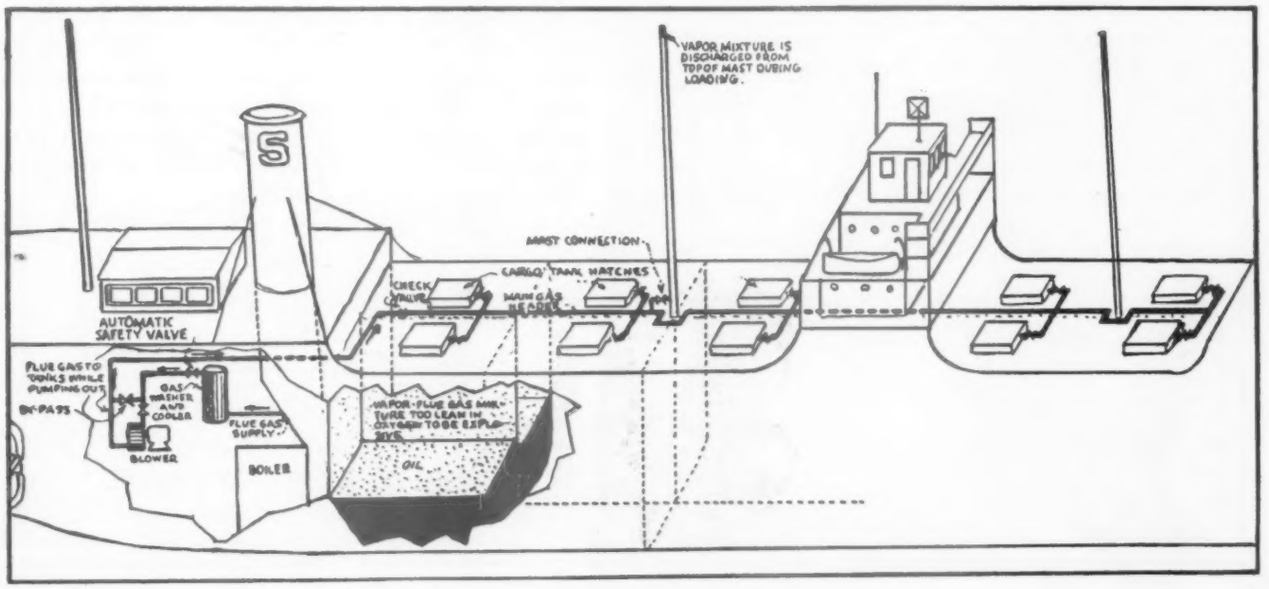
Under the new process the furnace gases take the place of the air usually permitted to flow into the tanks as the oil is pumped out, experience has shown that the introduction of ordinary air invites explosion when the atmospheric oxygen mixes with the petroleum vapors remaining in the tanks. The lack of oxygen in the furnace gases removes this menace.


SAFETY VALVE WHICH CLOSES AUTOMATICALLY IF PRESSURE ON WATER SPRAYS DROPS, OR IF TEMPERATURE OF GAS RISES.
COOL, CLEAN FLUE GAS TO TANKS
Water Spray
GAS BUBBLES THRU COLD WATER
COOLER WATER DISCHARGED OVERBOARD
HOT FLUE GAS FROM STACK.

The protective quality of the furnace gases extends to the period of refilling cargo tanks before the beginning of a new voyage. Under old methods, the vapors in the empty tanks were discharged through vent holes in the deck, producing the danger of explosion during the loading period. Where furnace gases are used the danger is minimized, but it is still present because of the explosibility of the vapors when they become mixed with the oxygen of the outside air. On board the H. M. Storey the tank vapors are forced by a blower into the hollow mast of the vessel, and discharged at the top of the mast.

Flue gas has been found useful when tanks are being cleaned or repaired—a time at which many serious explosions have been caused by torches or sparks. Forced into the oil tanks by a blower, the flue gases displace the oil vapors that may be present, and remove all danger of explosion.

It is believed that the new method does away with the explosion hazard, always regarded as the chief peril of tank-ship operation.



South America First in World Survey Begun by The Oil Weekly

ROY E. LEIGH

MAKING a comprehensive first-hand survey of oil conditions of the world, such as has been undertaken by THE OIL WEEKLY, is a new departure for an oil journal. Probably it is without precedent in any other trade publication field, as no other industry has so much become a world problem—as oil to a greater extent than any other commodity of commerce is essential to the advancement of all peoples, and oil is the one commodity of such ready transportation that the barrel of fluid on any coast has an intimate bearing upon the oil business in all parts of the world.

As announced in a previous issue, R. E. Leigh has joined the staff of THE OIL WEEKLY and has started a tour which will take him to the principal oil producing areas of the world outside of the United States. Mr. Leigh, having had executive experience in both domestic and foreign operations, is particularly well qualified to make the survey which has been undertaken, and having had experience as a writer for this journal, his ability to reveal the information he gathers interestingly and concisely, has been proven.

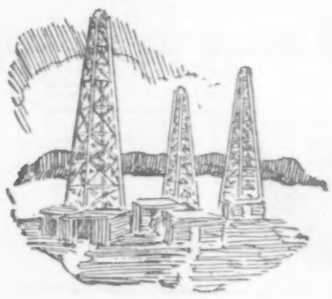
On the opposite page is shown a map of his first journey. The schedule outlined for this trip calls for its completion within seven months. While in some places available transportation will make traveling slow, sufficient time has been allotted to make possible a survey of the actual and potential oil producing areas, the companies operating, the methods employed, and to a great extent, the personnel of the crews doing the work. Mr. Leigh will find time to write his articles as he goes, so that the series will begin appearing in THE OIL WEEKLY at once and continue until every field of importance in the world, and a large number of lesser importance, have been treated.

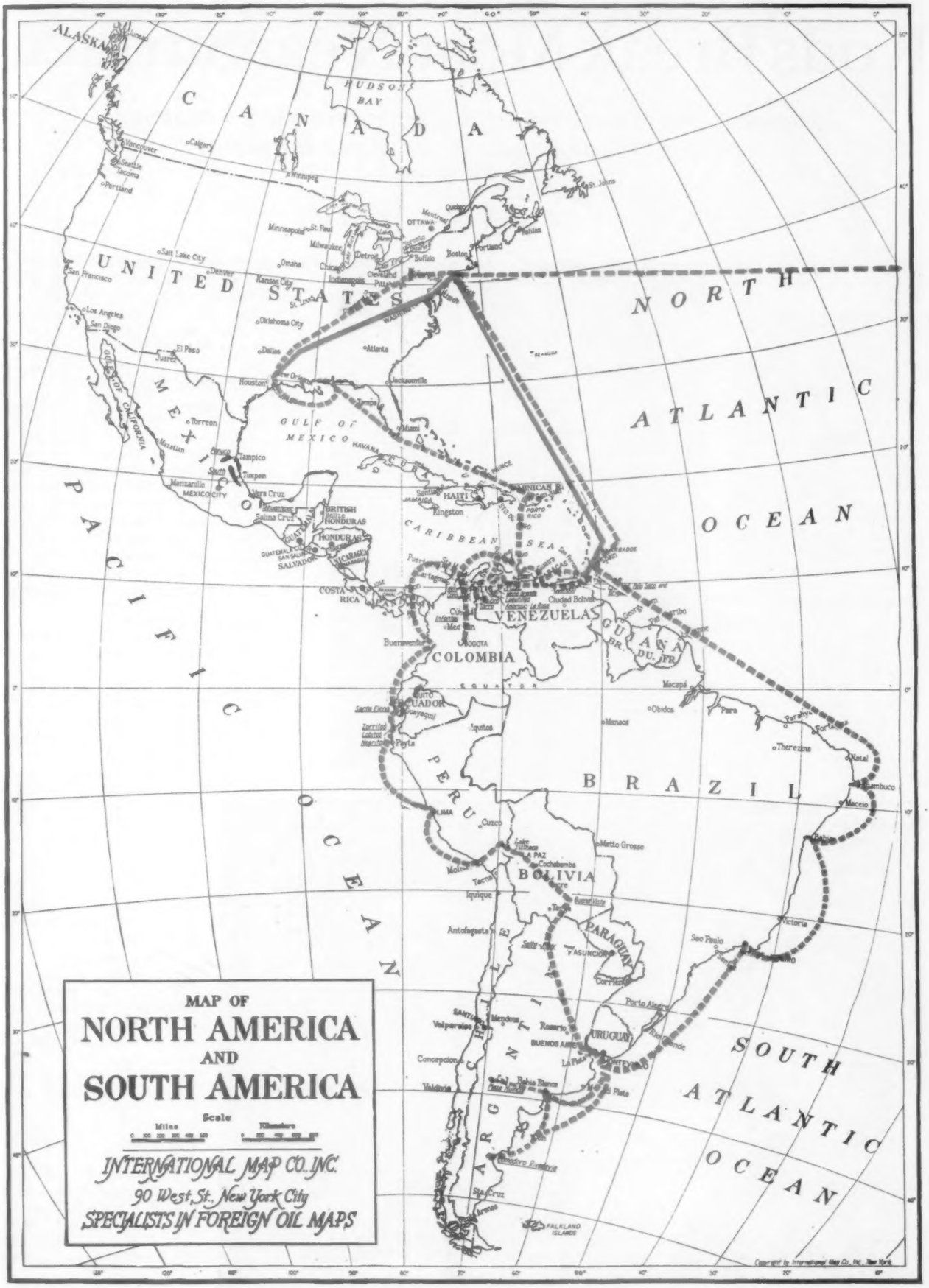
South America has been selected for the first survey because that continent ranks first potentially, and rapidly is becoming an important factor in world production. While inquiries have been under way by the governments of the world as to possibilities of a shortage of oil, exploration of South American areas has been under way, with the result that deposits have been revealed in such measure as to definitely set at rest, for the time being at least, the possibility of an oil shortage, and the situation now resolves itself into what nations will be favored in securing those supplies. American dominance apparently is to be maintained with American enterprise and American capital taking leadership in South America, with the result that each barrel recovered in the lower continent is in immediate competition with oil produced in any field in the United States.

This situation gives such a survey as THE OIL WEEKLY has undertaken more interest than the satisfaction of the curiosity an oil producer naturally has in what his foreign neighbor is doing. South America has a direct bearing upon the economic position of producers, transporters and refiners of petroleum in the United States, and upon the affairs of the manufacturer of supplies for those industries.

In arranging the preliminaries for his trip, Mr. Leigh met with many courtesies at the hands of American companies operating in South America and governmental departments, insuring that gathering the information he seeks will be greatly facilitated.

After returning to the United States in late July or early August, Mr. Leigh will begin arrangements for his trips to Europe and the Far East, where he will continue his investigations. He goes first to those parts which are of the most pressing interest and importance, and information on South American oil conditions will begin appearing in THE OIL WEEKLY with the present issue. To make this series of maximum benefit to them, readers are urged to arrange now for permanent filing of the weekly issues, that their copy of the survey of South America may be complete.





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Sucker Rod Strains and Stresses*

Rods Break Most Near Surface

Suggest possibility of minimizing trouble by making first thousand feet of stronger material

By F. W. LAKE

Superintendent of Production, Orange Division, Union Oil Company of California, Brea, California

IN the effort to maintain production, deeper producing horizons are being continually explored and the problem of lifting the oil to the surface is becoming more difficult.

Ultimately all wells decline to such a point that pumping is necessary. The increasing loads on sucker rods resulting from deeper pumping operations are approaching the ultimate strength of the rods with consequent reduction in the factor of safety. As this factor of safety decreases, the vibratory stresses causing fatigue, crystallization, and ultimate fracture becomes more important. Since these vibratory stresses are the result of varied pumping conditions, by proper adjustments they may be appreciably reduced.

In order to determine sucker rod loads, two instruments have been developed which give the sucker rod load in connection with other features of pumping motion. It is then possible to so adjust pumping conditions that sucker rod loads may be such as to give the minimum fatigue possible and yet produce the well to its maximum efficiency.

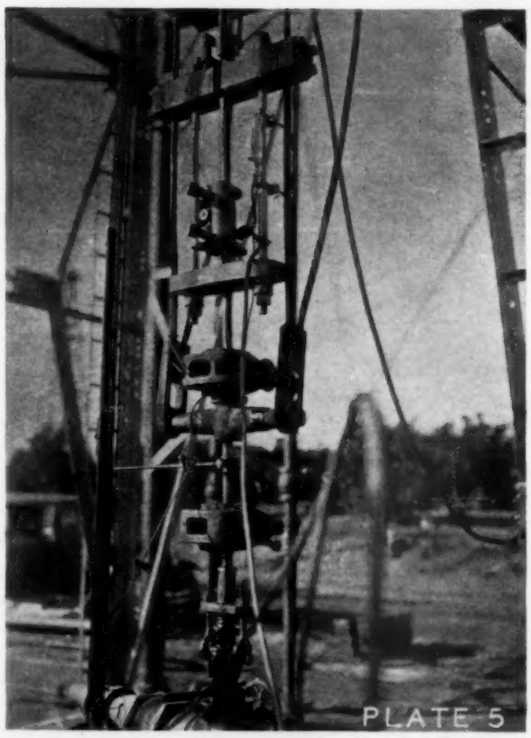


PLATE 5

Recording Dynamometer

The development of a recording dynamometer which gives an indicator card showing the actual load on the polished rod at each point of the pumping cycle has assisted in the investigation of pumping conditions. The instrument consists of a dynamometer head of the piston and cylinder type filled with castor oil; and a recording device, the movable card holder being connected with the dynamometer through a system of levers and the hollow spring gauge being connected with the fluid chamber of the dynamometer by a high pressure flexible tubing.

Figure 1 is a sketch showing the hook-up of the recording dynamometer at a pumping well.

The dynamometer head is hung from the beam with an ordinary hanger and lugs on the cylinder and the piston is attached to the polished rod. The movable card holder actuated through levers moves in a vertical direction proportionate to the movement of the polished rod. The recording arm of the hollow spring gauge inscribes on the card the pressure at all times. Thus the indicator card gives the load on the polished rod at all points in the pumping cycle.

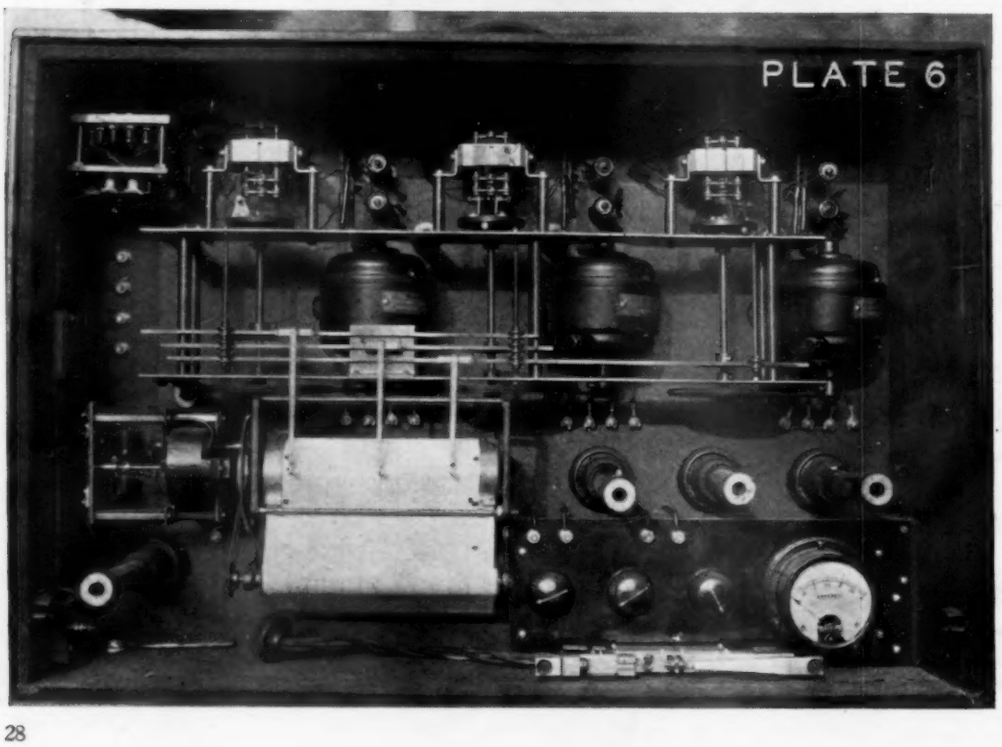


PLATE 6

The Electric Dynamotograph

The further study of pumping conditions, an electric dynamotograph was developed which gives concurrently the polished rod stroke, the polished rod load, and the plunger movement with respect to the working barrel, taking into consideration rod and tubing stretch.

The load on the polished rod is measured and recorded by means of a telemeter (developed by the United States Bureau of Standards) clamped on a

*Before Western Metal Congress.

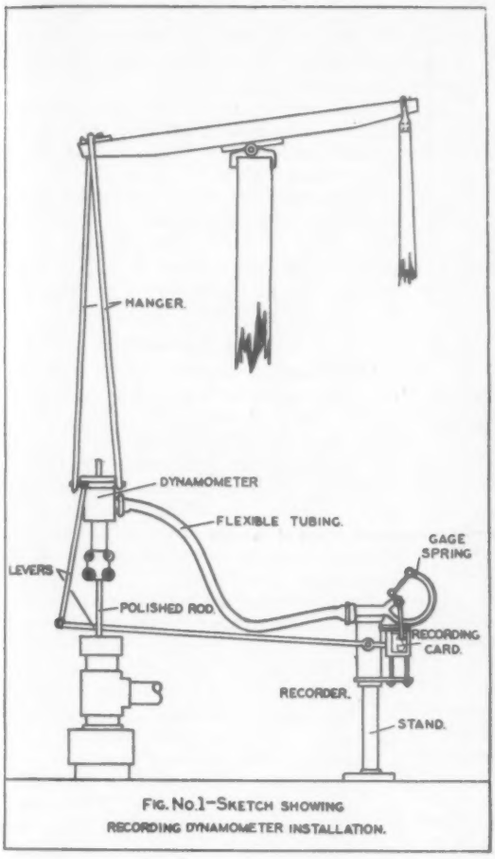
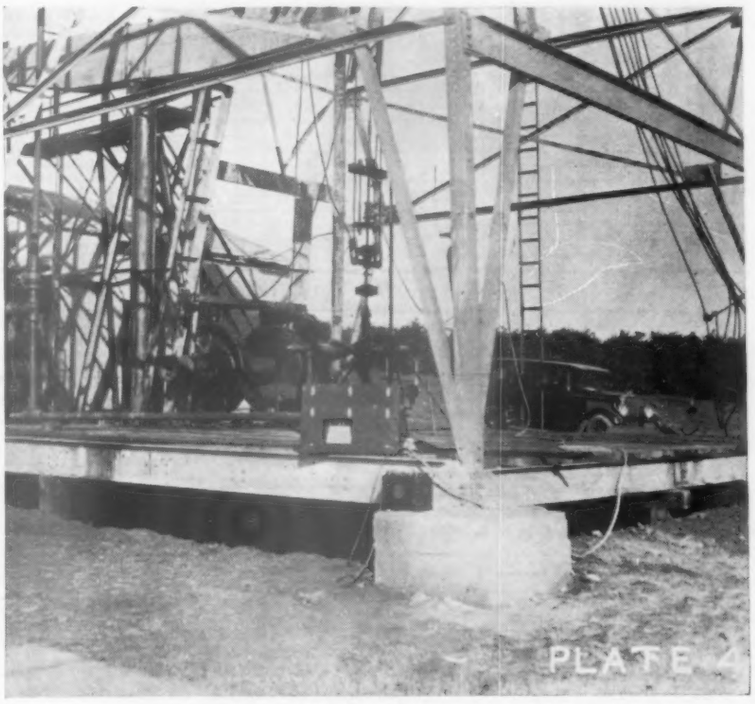
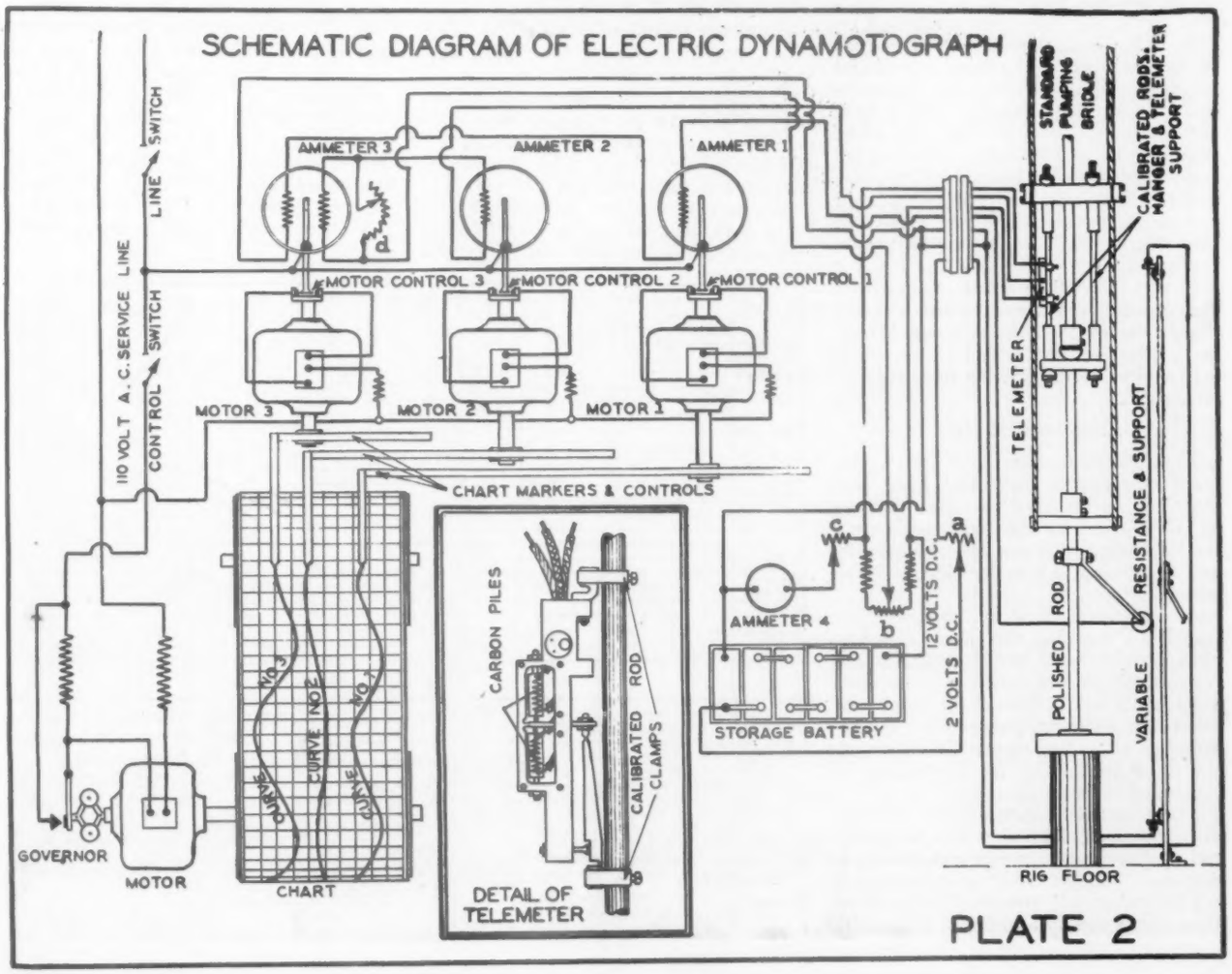
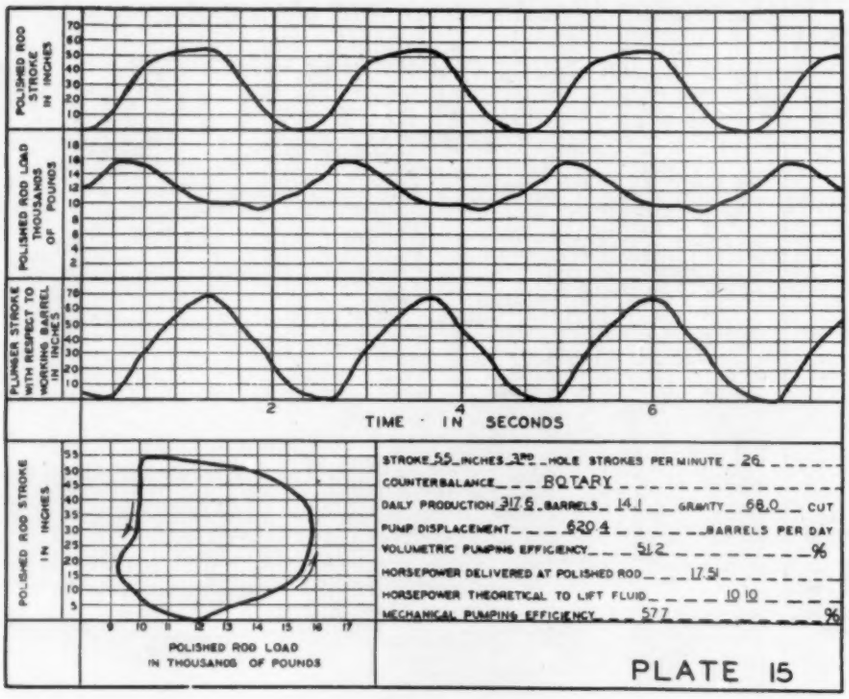


FIG. NO. 1—SKETCH SHOWING RECORDING DYNAMOMETER INSTALLATION.

Recording Dynamometer and Dynamotograph Used In Study of Pumping Conditions






POLISHED ROD STROKE IN INCHES
POLISHED ROD LOAD THOUSANDS OF POUNDS
PLUNGER STROKE WITH RESPECT TO WORKING BARREL IN INCHES
TIME IN SECONDS
POLISHED ROD STROKE IN INCHES
POLISHED ROD LOAD IN THOUSANDS OF POUNDS
STROKE 55 INCHES 3RD HOLE STROKES PER MINUTE 26
COUNTERBALANCE BOTARY
DAILY PRODUCTION 317.6 BARRELS 14.1 GRAVITY 68.0 CUT
PUMP DISPLACEMENT 620.4 BARRELS PER DAY
VOLUMETRIC PUMPING EFFICIENCY 51.2 %
HORSEPOWER DELIVERED AT POLISHED ROD 17.51
HORSEPOWER THEORETICAL TO LIFT FLUID 10.10
MECHANICAL PUMPING EFFICIENCY 57.7 %
PLATE 15

calibrated rod which supports one-half of the load. The polished rod stroke is measured by means of a vertical resistance wire, supported on the derrick floor, upon which a contact slides which is attached to the polished rod.

In the dynamotograph, as sketched on Plate 2, ammeter 1 is calibrated to read the polished rod stroke from the vertical resistance wire, and ammeter 2 is calibrated to read the polished rod load, from the telemeter, during the pumping cycle. Ammeter 3 computes the effect of tubing and rod stretch with various load changes and adds to or subtracts from the polished rod movement this amount and thus gives the plunger travel with respect to the working barrel.

Plate 4 shows the general set-up of the dynamotograph at a well. Plate 5 shows the details of the telemeter attachment, the vertical resistance, and slide. Plate 6 is a view of the interior of the dynamotograph.

Experimental Data

The following plates have been taken from the series of tests which have been made during the past two years. Plates 10, 14, 17, and 18 have been made with the hydraulic dynamometer and Plates 15 and 24 were made with the electric dynamotograph.

An excessive vibratory load is illustrated in Plate 10 at two widely different rates of pumping. Plate 14 illustrates extremely smooth load conditions with little vibratory stress. Plate 17 illustrates the effect of various strokes per minute when pumping with a cup pump. The effect of the pump sticking on the downstroke is illustrated in Plate 18.

Plates 15 and 24 illustrate the effect of different counter-balancing both on sucker rod load vibratory stresses and fluid production.

The sucker rod stresses illustrated in these plates are an average of the conditions encountered in pumping a group of wells in the Richfield district at an average depth of 4500 feet. As ¾-inch rods are used, the maximum loads of 13,000 to 16,000 pounds mean unit loads in excess of 30,000 pounds per square inch.

Fourteen strings of standard A. P. I. rods, not heat treated, have been used under these conditions. The average life per string has been 253 days with an average of 6.1 breaks per string, or an average of 41.5 days of service per break per string. Of the breaks, 52 per cent. occurred at depths less than 1000 feet, 26 per cent. between 1000 feet and 2000 feet, 21 per cent. between 2000 feet and 3000 feet, 1 per cent. below 3000 feet. Of the breaks, 95 per cent. were pin breaks, four per cent. in the body of the rod, and 1 per cent. in the box.

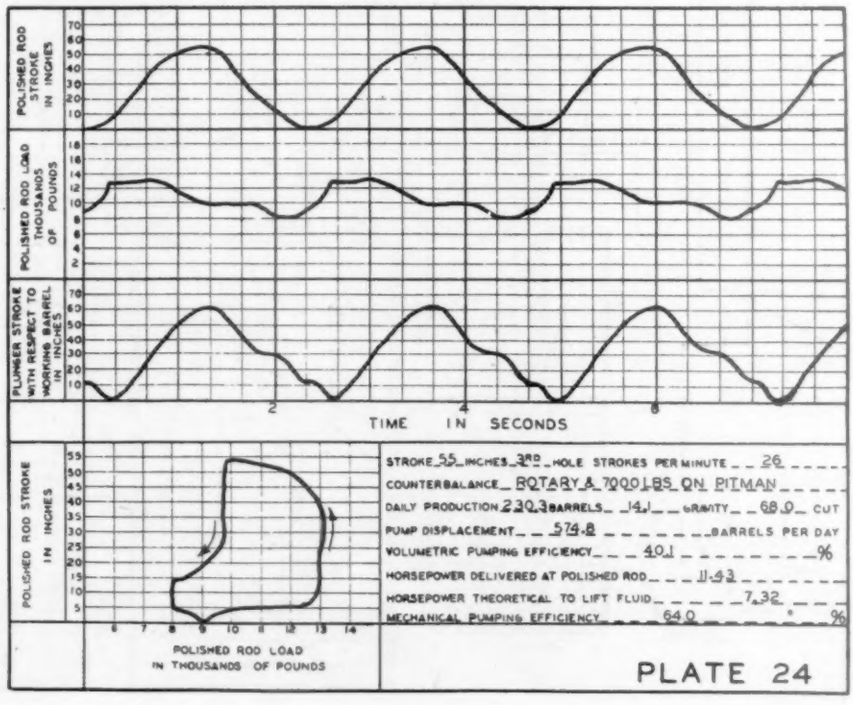
This record proves without question that the pin is the weakest part of the sucker rod string. With this in mind, four strings of A. P. I. rods with the pins heat-treated have been run under similar conditions of load and depth and have been in service an average of 63 days per string without a break. The longest service is on one string that has been in use 94 days.

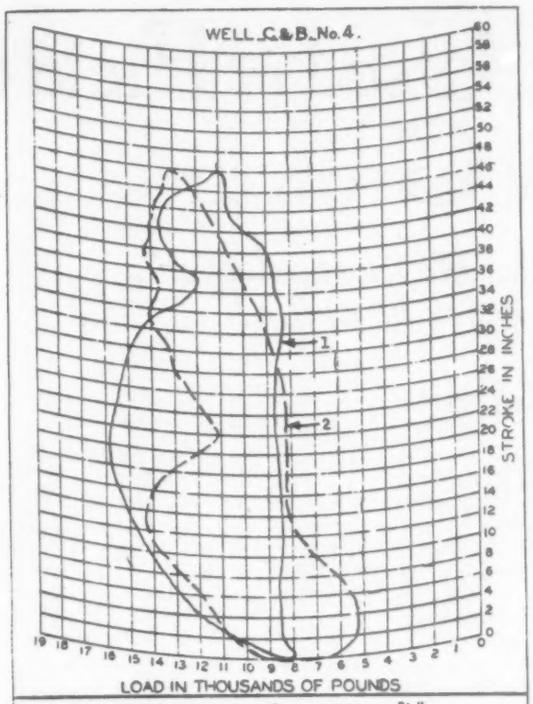
Conclusions

Investigation of the wells with the greatest number of breaks and the type of load to which the rods are subjected indicates that rod failure is primarily caused by the frequency and amplitude of the vibratory stresses during the pumping cycle provided, however, that the maximum load is within the elastic limits of the rod with a factor of safety of at least two.

As pin breaks are so much more frequent than any other break, especial consideration should be given to pin design, steel composition, and heat treatment. This should result in appreciably lengthening the average life of sucker rods. From the results so far obtained with the heat-treated pins, this appears likely.

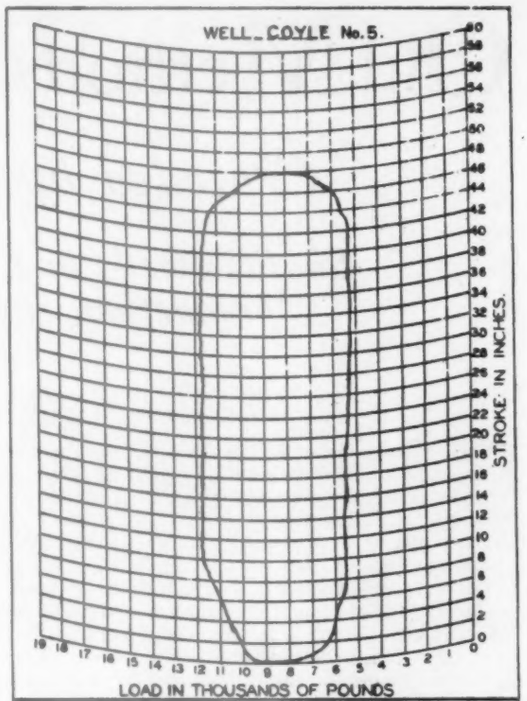
As approximately one-half of the breakage occurs above 1000 feet, it has been suggested that larger rods be run in the upper portion of the string so as to minimize this condition. It is doubtful if this will be economical because of the necessity of having two sizes of tools for handling the combination string. It is also questionable as to whether rods larger than the ¾-inch size can be universally used under deep pumping conditions as the tubing will not be sufficiently large. Therefore, better steels and methods of treatment will have to be introduced in order to continue deeper pumping operations.


POLISHED ROD STROKE IN INCHES
POLISHED ROD LOAD THOUSANDS OF POUNDS
PLUNGER STROKE WITH RESPECT TO WORKING BARREL IN INCHES
TIME IN SECONDS
POLISHED ROD STROKE IN INCHES
POLISHED ROD LOAD IN THOUSANDS OF POUNDS
STROKE 55 INCHES 3RD HOLE STROKES PER MINUTE 26
COUNTERBALANCE BOTARY A 7000 LBS ON PITMAN
DAILY PRODUCTION 230.3 BARRELS 14.1 GRAVITY 68.0 CUT
PUMP DISPLACEMENT 574.8 BARRELS PER DAY
VOLUMETRIC PUMPING EFFICIENCY 40.1 %
HORSEPOWER DELIVERED AT POLISHED ROD 11.43
HORSEPOWER THEORETICAL TO LIFT FLUID 7.32
MECHANICAL PUMPING EFFICIENCY 64.0 %
PLATE 24



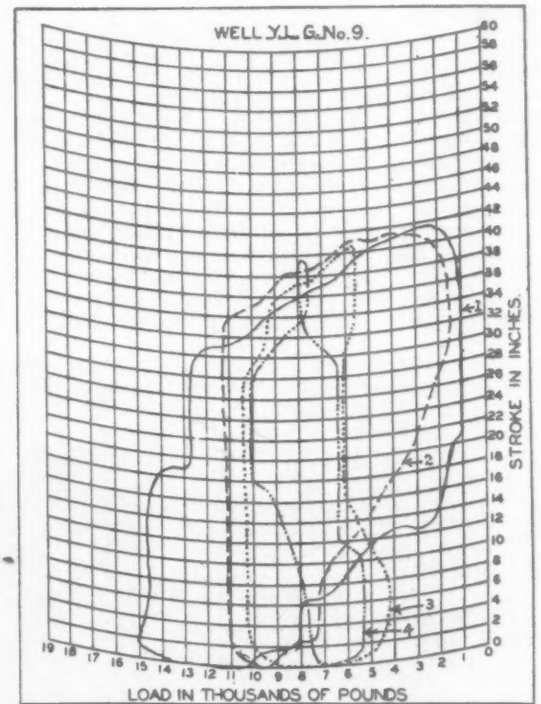
WELL DEPTH 4627' TUBING DIA 2" ROD DIA 3/4"
SIZE & MAKE PUMP 3" Plunger PUMPING DEPTH 4314'
LENGTH STROKE 48" STROKES/MINUTE (1=35) (2=18)
COUNTERBALANCE TYPE Band Wheel % OF RODS 100
AVERAGE DAILY PRODUCTION 150 BBLS. 22.0 GRAVITY 7.2 CUT.
REMARKS:- Excessive vibration on the up stroke.

FIG. No 10.



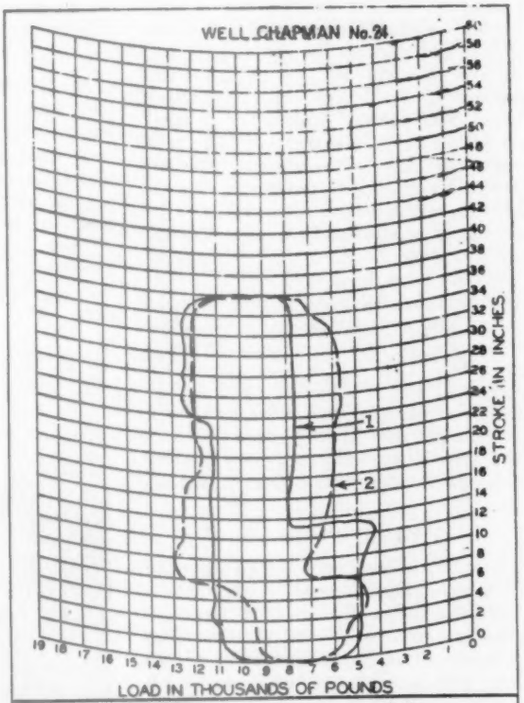
WELL DEPTH 4620' TUBING DIA 2½" ROD DIA 3/4"
SIZE & MAKE PUMP 2½" Fluid Packed PUMPING DEPTH 4543'
LENGTH STROKE 48" STROKES/MINUTE 28'
COUNTERBALANCE TYPE Band Wheel % OF RODS 100
AVERAGE DAILY PRODUCTION 80 BBLS. 14.5 GRAVITY 97.2 CUT.
REMARKS:- Nearly perfect chart.

FIG. No 14.



WELL DEPTH 4577' TUBING DIA 2½" ROD DIA 3/4"
SIZE & MAKE PUMP 2½" Cup PUMPING DEPTH 4220'
LENGTH STROKE 40" STROKES/MINUTE (1=36) (2=33) (3=23) (4=18)
COUNTERBALANCE TYPE Band Wheel % OF RODS 75
AVERAGE DAILY PRODUCTION 164 BBLS. 16.3 GRAVITY 48.8 CUT.
REMARKS:- Effect of various strokes per minutes in connection with a cup pump.

FIG. No. 17.



WELL DEPTH 4750' TUBING DIA 2½" ROD DIA 3/4"
SIZE & MAKE PUMP 2½" Cup PUMPING DEPTH 4440'
LENGTH STROKE 36" STROKES/MINUTE (1=28) (2=32)
COUNTERBALANCE TYPE Band wheel % OF RODS 75
AVERAGE DAILY PRODUCTION 200 BBLS. 20.5 GRAVITY 30.2 CUT.
REMARKS:- Pump sticking on down stroke.

FIG. No 18.

Old Methods Still Used *in* Fields *Crowded by* City Growth

Shallow wells in Los Angeles may have deeper production, but it will never be drilled

By BRAD MILLS
Staff Representative

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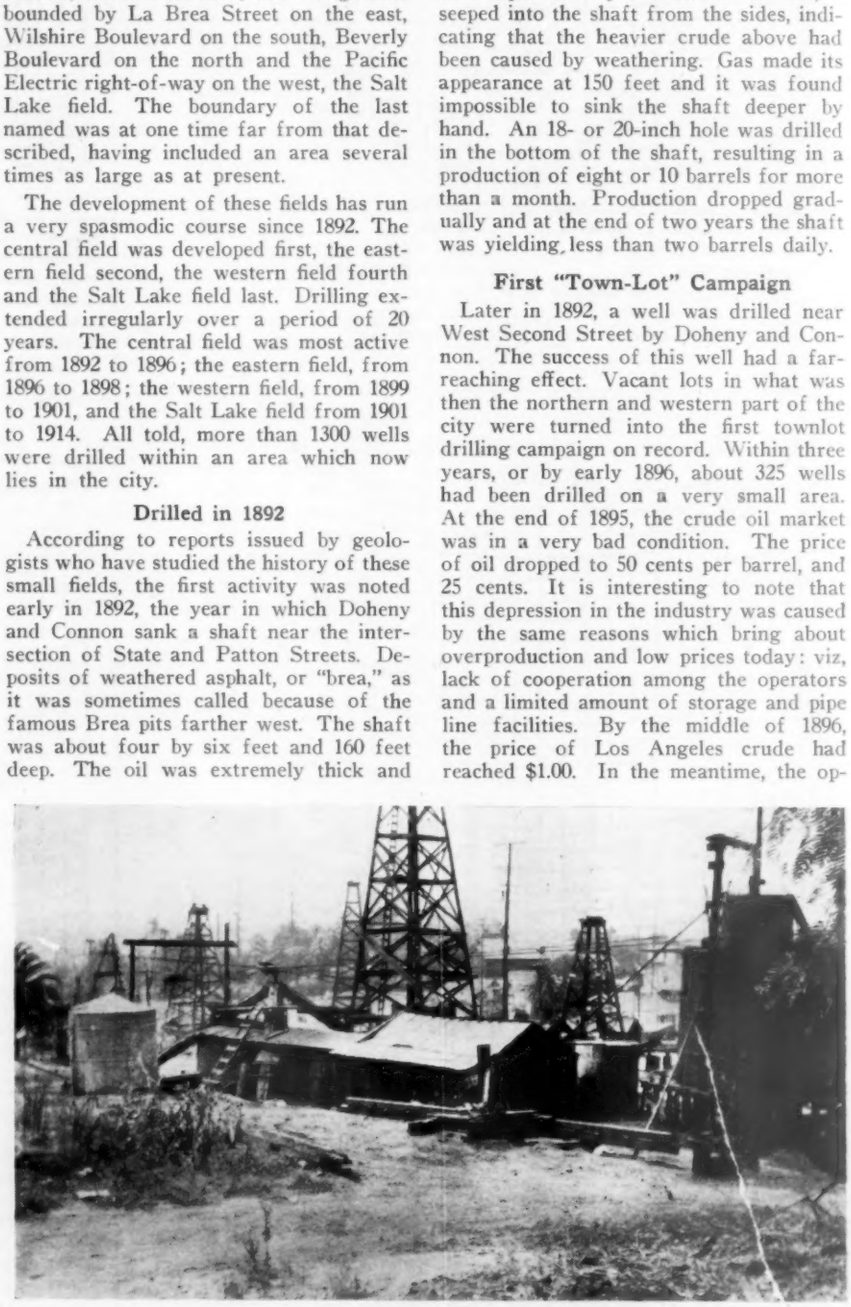

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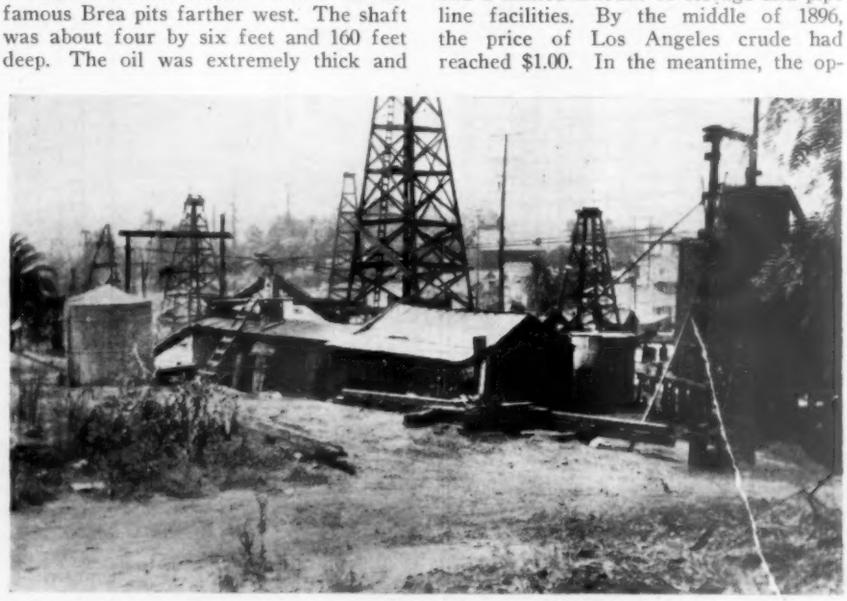

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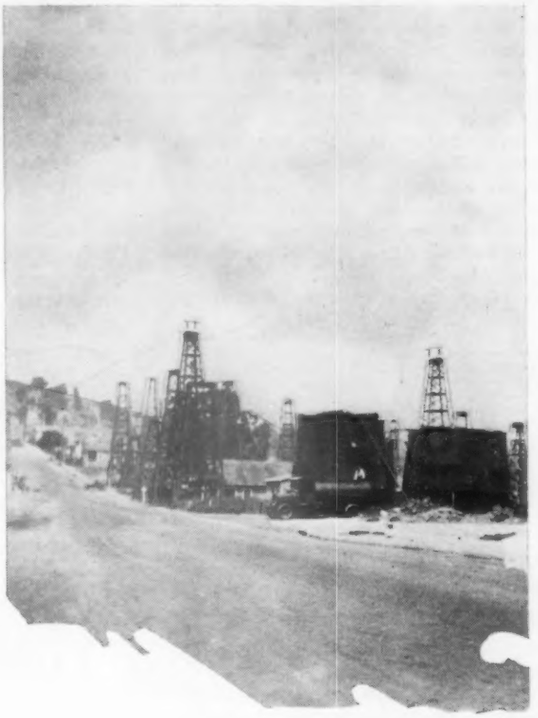

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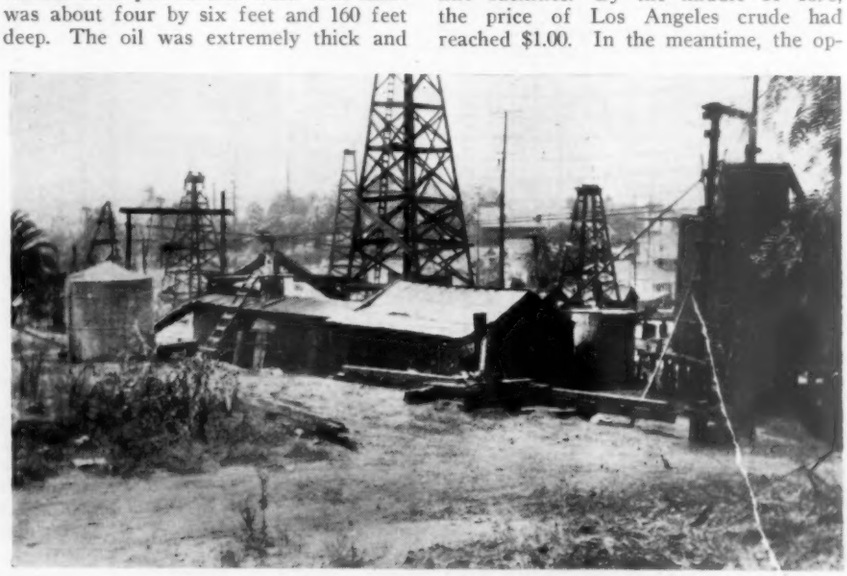

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The equipment used in drilling the wells and that now in use is so varied and mixed that inventions perfected from 1880 to 1920 are in evidence on every hand. Cable tools were used exclusively in developing all fields within the city, although rotary equipment was used in other parts of the state during the last few years of activity in the Salt Lake field. About 1898, the following equipment was used on the shallow wells: 15-horsepower boiler; 9 x 12 steam engine; 54-foot derrick; small manila drilling cable; straight pin cable tools; "Punch and Judy" temper screw, and small hand wrenches. California was so far from equipment manufacturers that improvised arrangements often worked wonders.

Derricks in the eastern Los Angeles field

The field equipment, much of which is in use today, was a little more up-to-date. Wooden tanks, elevated for gravity flow on one side but lower than the side of the hill on the other, served a dual purpose. By placing the tanks below the wells, the oil practically flowed from the mouth of the pump to storage. The outlet was on the reverse side, allowing the oil to flow out of the tank to a more central point. Many of these old wooden tanks are now in use. The pumping equipment in the wells was similar to that used in other fields today. Clumsy power arrangements were used with fair success. Some of these eccentrics pumped as high as 12 wells from one unit. Small boilers were first used, but gas engines were in vogue by 1905.

Treating Problems

Nearly every well produced water and emulsion, making the cleaning problem a serious one from the beginning. Three or four cleaning plants still are in operation near the center of the city. An examination of one of these plants shows the incorporation of ideas evolved from 1890 to 1928. Basically, the oil is being cleaned much as it was in 1900; but here and there are modern hookups and replacements which show that as something wore out, it was replaced with a more modern arrangement. The crude first is treated with raw steam, then sent through a series of pipes, which are exposed to an oil fire. The plant represents a rather dilapidated appearance, but seems to do the work.

The old-timers will tell you that the development of the small fields in the city was directly responsible for the growth of Los Angeles. About 1890, coal was the only fuel available for the small industries

in the city. Canada and Australia furnished the coal for the city, making fuel expensive. Industries shied away because of these conditions, so the story goes. The development of oil eliminated the use of foreign coal and attracted capital from all over the world. The oil producers rapidly did much missionary work within the city and within a few years had installed oil burners in blacksmith shps, hotels, factories and foundries. The use of oil became a fad, it seems, and at the same time helped to build a great city. The use of natural gas also grew, but the growth of the city helped to keep the oil industry healthy.

The complexion of the social situation in Los Angeles changed considerably as the result of the development of oil. Miners and others who boldly risked the few dollars they possessed to sink shafts and wells soon were rewarded with incomes large enough to knock on the door of society. After a short time, society heard the knock and let them in.

Although the city of Los Angeles would not permit deep drilling under ordinary circumstances, in case of emergency, such as war, the deeper sands probably would be developed. Geologists believe that an area near Washington and Arlington Streets is better than an even bet for deep production. Since other fields nearby have produced from deeper sands, there is no reason to doubt the existence of an oil pool below 3000 feet in more than one part of the city.

The oil fields of Los Angeles, with all of their romance, are doomed. Man is a cold-blooded animal in this respect, and human progress will not stand aside for sentiment.

After Deep Domes— Then What?

By JOHN F. WEINZIERL
Consulting Geologist

THE history of the Gulf Coast of Texas and Louisiana has been one principally concerned with the finding of shallow salt domes. Many a romantic story might be written about each individual dome, whether found by hunches or wiggle sticks, geology, topography, accident, or employment of geophysical instruments. If one depended alone upon the short and spectacular history of the entry of geophysical instruments on the Gulf Coast, one could write many a chapter of industrial history, bringing forth colossal developments, and one could elaborate upon human frailties.

There was a time, the end of 1926 and the beginning of 1927, when many regarded the further development on the Gulf Coast as limited because it was clear that only a given number of shallow domes could be found. Even among geophysical companies doing consulting work, speculations led to the eventual end of the geophysical work on the coast. Hence, steps were taken by those in charge to look for fields elsewhere, such as Mesopotamia, South Africa, South America, Siberia, Continental Europe, etc.

It was at this time that some dared to think that deep domes were possible. Aside from being distributed by discouraging remarks, they worked on without even a scout worrying much about their humdrum affairs. Needless to say, this new venture brought both surprising and profitable results, and the first successful deep dome (Sugarland Industries) brought on a rapid succession of probable deep dome discoveries which are today awaiting their turn at being verified by the drill.

The writer thinks that although mistakes will be made in the exact location of the deep domes that, nevertheless, the geophysical methods of today will at least be able to limit the dome's whereabouts within a given quadrant, which quadrant being known can be tested out by two or three wells.

Structures to Be Sought

After one has considered all these matters, one wonders what is the next type of structure to be sought. The writer has discussed this matter with many geophysicists and geologists, and a consensus of opinion of a part of these men will allow the following list of structures that will be found in the future by the now employed geophysical instruments:

1. Dome like uplifts on flanks or tops of long ridges in the subsurface,
2. Series of faults, cross-faults (block fault systems),
3. Possibly old shore lines,

and here the writer will venture the finding of long drawn out oil fields in greater depths which will put similar more shallow fields elsewhere in the background.

The question naturally arises what geophysical methods will be employed in the discovery of these probable structures.

The method employing the torsion balance has come to the foreground in the last year in the discovery of deep domes and those of us connected with it are prone to give it priority from now on. This brings about a change of importance for this method and the seismic. At one time the seismic method was the discoverer and the torsion balance, a method to follow up and check the former. Now the method of using the torsion balance has taken in the ranks of discoverer and the seismic in part that of a checking device.

The gravimetric method or that employing the torsion balance and the seismic will have a neck-to-neck contest on deeper structures and it will remain a matter of preference which to use by those employing these methods for the time being.

The writer has laid more stress upon the above methods because up until now, aside from a few instances, the day of general use of electric and magnetic methods has not yet come in on the Gulf Coast. However, it must be remembered that in these fields those interested are not asleep and that possibly some revolutionizing methods may be at hand.

Tectonic Movements

Not until some more fundamental conceptions of the greater tectonic movements on the Gulf Coast are known will any great problem be solved. At present, the most promising instrument for such work is the pendulum. Owing to the cost and the great amount of time involved, and the desire to put such results into as many hands as possible, the government should lend a hand through the United States Coast and Geodetic survey. This branch should systematically survey the Gulf Coast at regular intervals and establish a close network of stations. This would give some idea of mass distributions and hence a possible clue for those interested in structural conditions.

The writer thinks from material he has at hand that the day of great oil output on the Gulf Coast has not yet begun. Here again he wishes to point out that the geologist is not making enough use of his helpmate, the geophysicist.

A careful and comprehensive compilation of all known and attainable paleontological information along with geophysical data at hand, and this fitted into a framework built up from the pendulum survey, should in a way explain the history of the greater tectonic movements on the Gulf Coast which is buried below the Tertiary blanket. This should help us to work out a possible structure in the subsurface and should give us some idea of the possibility of production from such a structure, even before tested by a drill.

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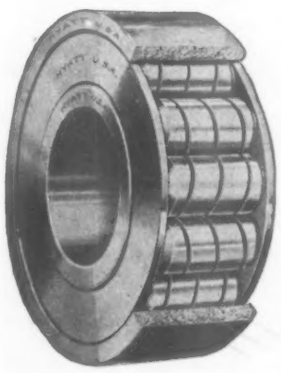

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"Is Petroleum Industry Over-Engineered?"

A. I. M. E. Program

"If So, to What Extent?" subject to be discussed by Petroleum Section at New York, February 20

BARTLESVILLE, Okla. — Three distinct sessions will be held during the annual meeting of the Petroleum Division of the American Institute of Mining & Metallurgical Engineering, which convenes February 20 at the Engineering Societies Building, 29 West 39th Street, New York City.

A. W. Ambrose, manager of production, Empire Oil & Refining Company, chairman of the Petroleum Division, and other officers have arranged the program to cover a diversity of subjects of wide interest to the entire industry, presenting a complete review of the world's producing areas, written by nationally known authorities, and subjects to be divided into the session holding greatest interest for a particular group.

A transportation program has been worked out, allowing those attending the annual meeting to secure half fare on return tickets. Buyers of tickets are asked to request a certificate for the meeting and deposit the certificate when registering.

A program of entertainment has been completed for wives of visitors, including tours of the city, teas and dinners.

Economics

The following papers will be presented at the Petroleum Economics session:

"Gasoline Economics and Refinery Operations," by H. J. Struth, Gulf Publishing Company, Houston.

"Fuel Oil, the Safety Valve of the Petroleum Industry," by C. J. Deegan, Marland Oil Company, Ponca City.

"The Market Action of Oil Securities," by J. Elmer Thomas and M. D. Gould, of Fenner & Beane, Fort Worth.

Over Engineered?

The petroleum engineering education session will be in the form of a symposium, offering two topics for discussion: (1) "Is the Petroleum Industry Over-Engineered? If so, to What Extent?" (2) "To What Extent Should the Engineering School Attempt to Train Research Specialists for the Industry?"

The Production Engineering session will be held on Wednesday, February 20, and will include the following papers and discussions:

"Crooked Holes," by Alex Anderson, of Fullerton, California.

"Mechanics of Sucker Rod Movements," by Fred Wood, Midwest Refining Company, Casper.

"Crooked Holes," by E. H. Griswold, Marland Oil Company, Ponca City.

"Analysis of Water of the Salt Creek Field, Applied to Underground Problems," by J. Stanley Ross and E. A. Swedenborg, United States Bureau of Mines, Shreveport.

"Core Studies of the Bradford Sand, from the Bradford Field," by Professor C. R. Fettke, Carnegie Institute of Technology.

"Factors Controlling Spacing of Wells," by Robert W. Phelps, Union Oil Company of California.

"The Effect on Producing Wells of Shutting in Offset Wells," by C. M. Nickerson, U. S. Navy Department, Los Angeles.

"Repressuring at Santa Fe Springs," by A. C. Rubel, Union Oil Company, Compton, California.

"Gas Lift on Heavy Oils in Venezuela," by F. P. Donohue, New York City.

The following papers will be presented at the Petroleum Research session on Thursday:

"Drilling Methods and Equipment," by J. H. Howard, General Petroleum Corporation, Los Angeles.

"Means of Controlling Gas Oil Ratios," by H. N. Marsh and Bruce H. Robinson, General Petroleum Corporation, Los Angeles.

"Back Pressure Control of Flowing Wells," by H. C. Miller, U. S. Bureau of Mines, San Francisco.

"Natural Flow and Gas Lift Experiments and Apparatus—Petroleum Experiment Station, U. S. Bureau of Mines," by R. R. Brandenthaler, G. Wade and W. S. Morris, U. S. Bureau of Mines, Bartlesville.

The general session on Thursday evening will be preceded by a banquet.

Review of Foreign Fields

The foreign reviews will be presented on Wednesday afternoon as follows:

"Canada," by G. R. Elliott, of Calgary.

"Russia," by Basil Zavoico, of New York City.

"Roumania," by George Anagnostache, of the Roumanian Legation, Washington, D. C.

"Persia and Iraq," by Sir John Cadman, of the Anglo-Persian Oil Company, Ltd., London.

"Mexico," by V. R. Garfias, of Henry L. Doherty & Company, New York.

"Venezuela," by H. J. Wasson, of New York.

"Argentine," by Jose M. Sobral, of Buenos Aires.

"Peru," by A. M. McQueen, of the International Petroleum Co., Ltd., Toronto, Canada.

"Colombia," by J. T. Duce, The Texas Company, New York.

"Bolivia," by Gilbert P. Moore, New York.

Domestic Fields

The following reviews of domestic producing areas will be given Thursday morning and afternoon:

"United States," by Joseph Jensen, Associated Oil Company, Los Angeles.

"California," by W. R. Wardner, Boston Petroleum Company, Bakersfield.

"Oklahoma," by Earl P. Hindes, Empire Oil & Refining Company, Bartlesville.

"Kansas," by Anthony Folger, Wichita.

"Permian Basin, West Texas, Panhandle, Eastern New Mexico," by A. R. Denison, Amerada Petroleum Corporation, Fort Worth.

"North and Central Texas," by W. G. Wender, Amerada Petroleum Corporation, Fort Worth.

"East Texas and the Balcones Fault Zone," by Dr. F. H. Lahee and F. E. Heath, Sun Oil Company, Dallas.

"Gulf Coast—Texas and Louisiana," by W. F. Bowman and John Vetter, Associated Oil Company, Houston.

"Southwest Texas," by Olin G. Bell, Humble Oil & Refining Company, Laredo.

"Rocky Mountain District," by Dean Winchester, Denver.

"Arkansas, Mississippi and North Louisiana," by H. G. Schneider, Dixie Oil Company, Shreveport.

"Montana," by Ralph Arnold, Los Angeles.

"Appalachian Fields," by Jerry Newby, Bradford.

The banquet on Thursday evening will be followed by papers on the "Crude Oil Supply," by Howard S. Bryant, Skelly Oil Company, Tulsa; and on the "World's Oil Supply," by V. R. Garfias, Henry L. Doherty & Company, New York. H. W. Camp of the Empire Oil & Refining Company, Tulsa, will present a paper at this general session on "Developments in Refining of Petroleum and its Constituents for the Year 1928."

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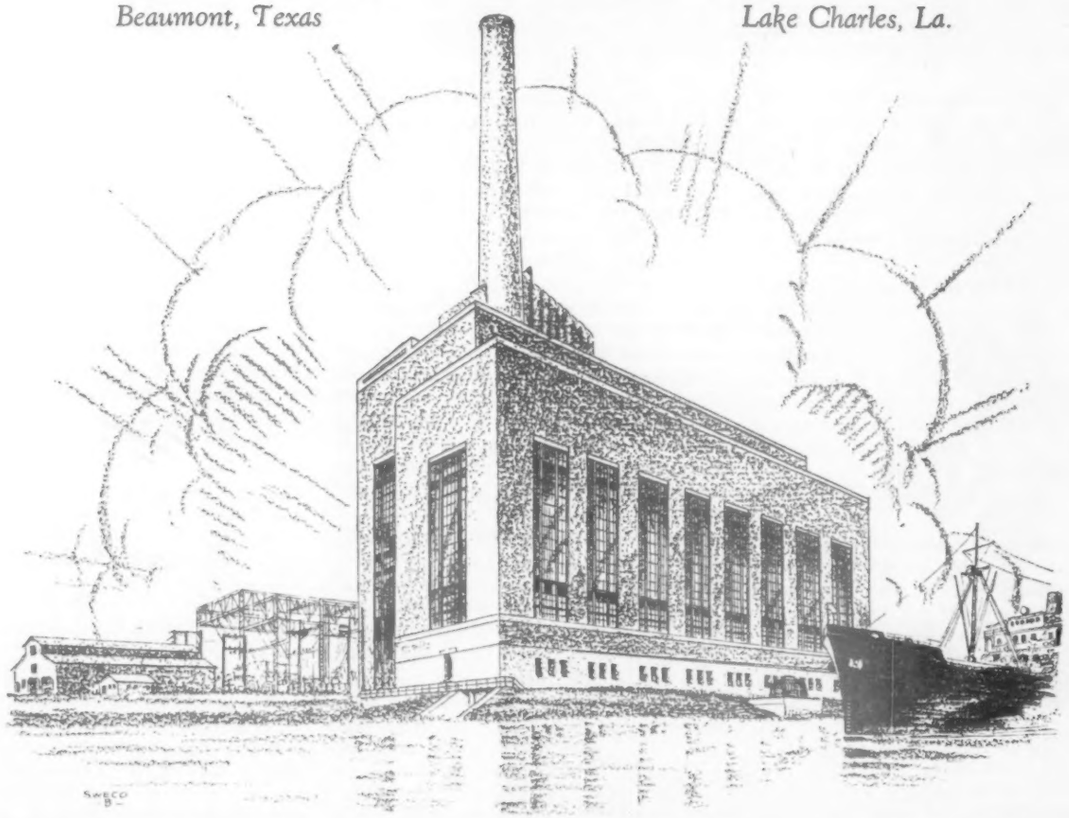

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Oklahoma Production Limit Set At 650,000 Barrels

Greater Seminole operators draw up agreement to hold down output until May 1, resolution sets out method of proration in flush fields

TULSA.—Producers of the Greater Seminole area today drafted and approved a resolution which plans to restrict the daily output of that area to such an extent that the total daily production for Oklahoma shall not exceed 650,000 barrels. Present Oklahoma production is around 725,000 barrels.

The resolution was not approved by vote, since its preparation required so much time that many had left the meeting. The representatives present, however voiced approval of what the resolution contains. It will be taken to all Seminole producers for final approval and signatures. The plan will become effective upon receipt of such signatures and the setting up of the organization essential to enforcement of its terms.

The resolution places Ray M. Collins in charge of the proration task, as umpire, a position he has held since proration was first begun in the Seminole area. The terms and working method are outlined in the resolution as follows:

"Resolution adopted at a meeting of operators in the Greater Seminole field held February 5, 1929.

"Resolved, that in the interest of conservation of petroleum and to meet the present condition of over production in Oklahoma, the following plan be and it is hereby adopted:

"(1) Oklahoma oil production shall be limited to approximately 650,000 barrels per day, which figure represents the estimated present demand, and that figure shall be used until it is changed at a later meeting of like kind. The reduction of potential production in Oklahoma of said figure of approximately 650,000 barrels per day shall be reached by proration of all Greater Seminole pools.

"(2) Proration shall be applied on a percentage basis by leases, upon information furnished to, and as far as practicable upon gauges taken by or under the direction of, the umpire, twice each month. The proration shall be such percentage of potential production as the umpire shall find necessary, pool by pool, to realize a like degree of actual proration among all pools, and to accomplish the object of holding the total Oklahoma production at approximately 650,000 barrels per day. To make the actual or realized proration operate equally among different pools, the umpire may, so far as he finds necessary, compensate for differing rates of decline by applying different percentages to the several pools. For example, if a realized proration of 15 per cent. is necessary at a given time in order to hold the total figure at 650,000 barrels per day, the umpire may apply to a settled pool a proration of 17½ per cent., if he finds that percentage, applied lease by lease, achieves a realized proration of 15 per cent.; while in a pool more flush in character, the umpire may find that in order to realize a proration of 15 per cent., he needs to apply to the leases in such pool a cut of 30 per cent., and he shall govern himself accordingly.

Fix Potential

"(3) To set this plan in motion, the umpire shall forthwith request from each producer an affidavit showing his production by leases in the first five days of February and the average of the daily production so shown shall constitute potentialities until gauges can be taken.

"(4) All drilling wells shall take a delay, prior to drilling into the sand, of a number of days having a relation to the average drilling time on Seminole wells, considered to be 75 days, equal to the actual or realized percentage of proration then currently in effect.

"(5) The Wilcox sand in the western section of Township 8, Range 5, shall not be brought into production, except that in the case of an expiring lease, a well which has failed to obtain commercial production in the Misener or Hunton formations may, by special arrangement between the operator and the umpire, be allowed to penetrate the Wilcox sand and to produce therefrom only such amount of production, not exceeding 100 barrels per day, as shall protect the lease.

"(6) The inadvisability of having the Mission pool opened at this time is recognized and the operators in that area are urged to cooperate with the umpire in a plan that will postpone the bringing of that pool into production.

"(7) The administration of this plan is committed to Ray M. Collins, who is hereby authorized to act as conservation umpire for this purpose, and the said umpire is authorized to employ as many assistants as he shall deem necessary, not exceeding 15 in number, to administrate this plan.

"(8) In addition to the pools and areas hereinbefore specifically referred to, other outside areas do now threaten and from time to time will threaten to add to the burden of over production, and recognition is hereby given to the desirability of having all such areas restrict or postpone operations to the greatest possible extent, and all operators therein are urged to cooperate sympathetically with the umpire in an effort to hold such areas back from production.

"(9) This resolution is intended to be effective for the period ending May 1, 1929, but may be sooner modified or revoked by the action of a like meeting of Greater Seminole operators."

The present effort to bring a reduction in the output of oil from Oklahoma fields had its start here February 1, when representatives of several of the larger oil companies met at headquarters of the Mid-Continent Oil & Gas Association. The following resolution was adopted then:

"It is the consensus of the oil producers in the State of Oklahoma that there is approximately 50,000 to 75,000 barrels of oil per day being produced in Oklahoma in excess of consumption with other large potential production immediately in prospect.

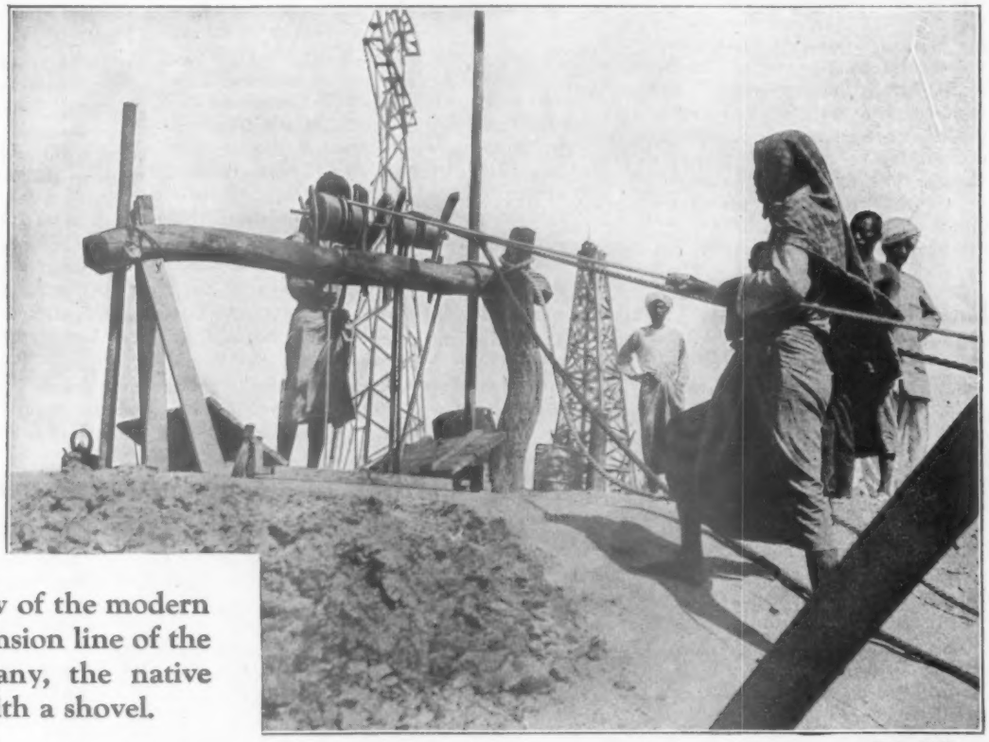
"Therefore, in order to adopt a definite and constructive means of conservation, Ray M. Collins is employed as oil and gas conservation umpire until May 1, 1929, and is hereby directed to immediately assemble the operators interested in all the important producing areas in Oklahoma for the purpose of reaching agreements for curtailment of drilling and reduction of production to the end that waste may be eliminated and the oil and gas resources in such state may be conserved.

"Said producers pledge their assistance to the umpire to carry out this conservation program with the recommendation that effort be immediately made to curtail in the Seminole district and other important areas a sufficient amount of production to maintain a balance between such production and consumption requirements.

"Nearly all of the producers named also are operators in Kansas and we indorse the same action so far as that state is concerned and recommended that a similar meeting of the Kansas producers be held at the earliest possible date to consider such action."

This resolution bore the following signatures: E. H. Moore, president, Independent Oil & Gas Company;

WEST meets EAST
- - in the Burma Oil Fields



Ewing Galloway

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The crude windlass is used by women to elevate baskets of earth and rock from the men digging in the pit bottom. When oil sand is reached 250 or 300 feet down, this predecessor of the crown block aids in pulling up leather buckets full of crude oil.

Here indeed West meets East, and side by side are methods a thousand years apart.

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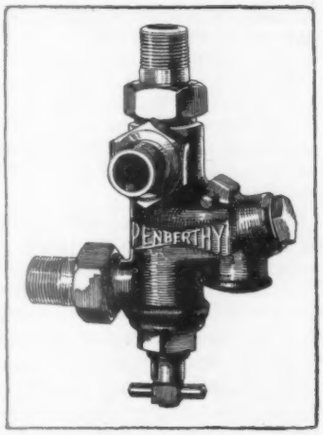

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Clyde Alexander, vice-president, Phillips Petroleum Company; C. C. Herndon, vice-president, Skelly Oil Company; Dana H. Kelsey, vice-president, the Prairie Oil & Gas Company; T. B. Slick; W. C. Franklin, vice-president, Tidal Oil Companies; W. T. Funk, vice-president, Cartler Oil Company; J. A. Green, assistant to the president, Shell Petroleum Corporation; Burdette Blue, vice-president, Indian Territory Illuminating Oil Company; Rush Greenslade, vice-president, Gypsy Oil Company; R. F. McArthur, vice-president, Barnsdall Oil Corporation; R. E. Wertz, vice-president, Producers & Refiners Corporation; H. R. Straight, vice-president, Empire Oil & Refining Company; R. A. Griffith, president, Sinclair Oil & Gas Company; Comer Plummer, vice-president, Pure Oil Company.

La Fourche Parish Dome Sulphur Deposit

Houston—Evidences that a sulphur field exists at Chacahoula salt dome, five miles from Thibodaux, La Fourche Parish, Louisiana, are had in a recent trade made by the Union Sulphur Company, oil and sulphur producers, to drill a large amount of acreage for sulphur. The price paid for leases and immediate beginning of work on the acreage indicates a knowledge that the dome is to be highly profitable for sulphur.

Union Sulphur Company paid Dibert, Stark & Brown of Orange, Texas, $100,000 cash for an option on 1840 acres and agreed to pay $800,000 at the expiration of nine months, plus a royalty of $1.10 per long ton (2240 pounds) on all sulphur produced. The operators must, according to the lease contract, be producing sulphur within two years.

The acreage taken by Union Sulphur Company lies slightly south of the present exploration work carried on by the Gulf Refining Company of Louisiana for oil. Included in the 1840 acres is all of sections 76 and 77, the southeast three-quarters of Section 70, the south half of the south half of Section 71 and the south half of the south half of Section 72, township 15s, range 15e.

Union Sulphur Company is now building a plank road into the newly acquired property from the Thibodaux-Morgan City highway, which crosses the dome. Work will continue on preliminary work, and drilling is expected to be started within the next few months.

Chacahoula dome was discovered about two years ago by seismograph by Gulf Refining Company of Louisiana, which organization has the bulk of the acreage on and around the dome. With the exception of E. F. Simms interests, which has a lease on all of Section 65-15s-15e except the southeast 40 acres, no other oil company holds close-in acreage. Gulf Refining Company recently abandoned its eighth wildcat test on Chacahoula dome and has started No. 9 location. No. 8 was abandoned at 1240 feet in cap rock because of a bad hole. No. 9 is located 50 feet east of No. 8.

Stocks Increased in December Government Report Shows

WASHINGTON, D. C.—According to reports received by the Bureau of Mines, Department of Commerce, the production of crude during December aggregated 79,448,000 barrels, a daily average of 2,563,000 barrels. This represents an increase over the daily average for November of 29,000 barrels, but is slightly below the high average established during October. Oklahoma and Texas showed relatively small increases over the preceding month, but California registered another material increase. This resulted primarily from the completion of large wells in the two new deep sand zones at Santa Fe Springs. The West Texas area recorded a small increase over November while the Seminole, Oklahoma, area continued to decline. This was counterbalanced, however, by successful extension in St. Louis and Maud areas, nearby. The majority of the remaining producing states, with the exception of Kansas, showed declines in production during December.

Total stocks of crude east of California increased approximately 800,000 barrels. Stocks of light oil in California increased for the first time in several months, but the greatest accumulation in that state occurred in stocks of heavy crudes, which rose to a new high level of 99,975,000 barrels. Stocks of all oils, including crude and refined products, registered an increase of 4,958,000 barrels during the month and aggregated 614,539,000 barrels on December 31, 1928.

The accompanying analysis of supply and demand of all oils presents a composite picture of the general petroleum situation:

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke, and asphalt in thousands of barrels of 42 gallons)

	Dec. 1928	Nov. 1928[1]	Dec. 1927	Jan.-Dec. 1928	Jan.-Dec. 1927[2]
NEW SUPPLY:					
Domestic production:					
Crude petroleum:					
Light	71,231	67,999	66,427	806,534	788,794
Heavy	8,217	8,032	8,524	93,830	112,335
Total crude	79,448	76,031	74,951	900,364	901,129
Natural gasoline	3,929	3,769	3,433	42,286	38,657
Benzol	253	241	212	2,810	2,562
Total production	83,630	80,041	78,596	945,460	942,348
Daily average	2,698	2,668	2,535	2,583	2,582
Imports:					
Crude	6,807	6,908	6,210	79,583	58,383
Refined	1,097	728	756	11,891	13,353
Total new supply all oils	91,534	87,677	85,562	1,036,934	1,014,084
Daily average	2,953	2,923	2,760	2,833	2,778
Change in stocks all oils	4,958	2,212	3,127	24,932	68,471
DEMAND:					
Total demand	86,576	85,465	82,435	1,012,002	945,613
Daily average	2,793	2,849	2,659	2,765	2,591
Exports:[3]					
Crude	1,529	1,691	1,717	18,973	15,844
Refined	9,483	11,298	9,366	136,489	125,191
Domestic demand	75,564	72,476	71,352	856,540	804,578
Daily average	2,438	2,416	2,302	2,340	2,204
Excess of daily average domestic production over domestic demand	260	252	233	243	378
STOCKS (end of month):					
Crude petroleum:					
East of California[4]:					
Light	320,015	319,196	303,539	320,015	303,539
Heavy	48,416	48,423	48,499	48,416	48,499
California:					
Light	16,995	16,524	20,086	16,995	20,086
Heavy[5]	99,975	98,529	93,719	99,975	93,719
Total crude	485,401	482,672	465,843	485,401	465,843
Natural gasoline at plants	608	404	734	608	734
Refined products	128,530	126,505	123,030	128,530	123,030
GRAND TOTAL STOCKS ALL OILS	614,539	609,581	589,607	614,539	589,607
Days' supply[6]	220	214	222	222	228
Bunker oil (included above in domestic demand)	4,235	4,235	4,264	51,124	50,051

[1]Revised. [2]Final figures. [3]Includes shipments to non-contiguous territories. [4]Exclusive of producers' stocks. [5]Includes fuel oil. [6]Grand total stocks divided by daily average total demand.

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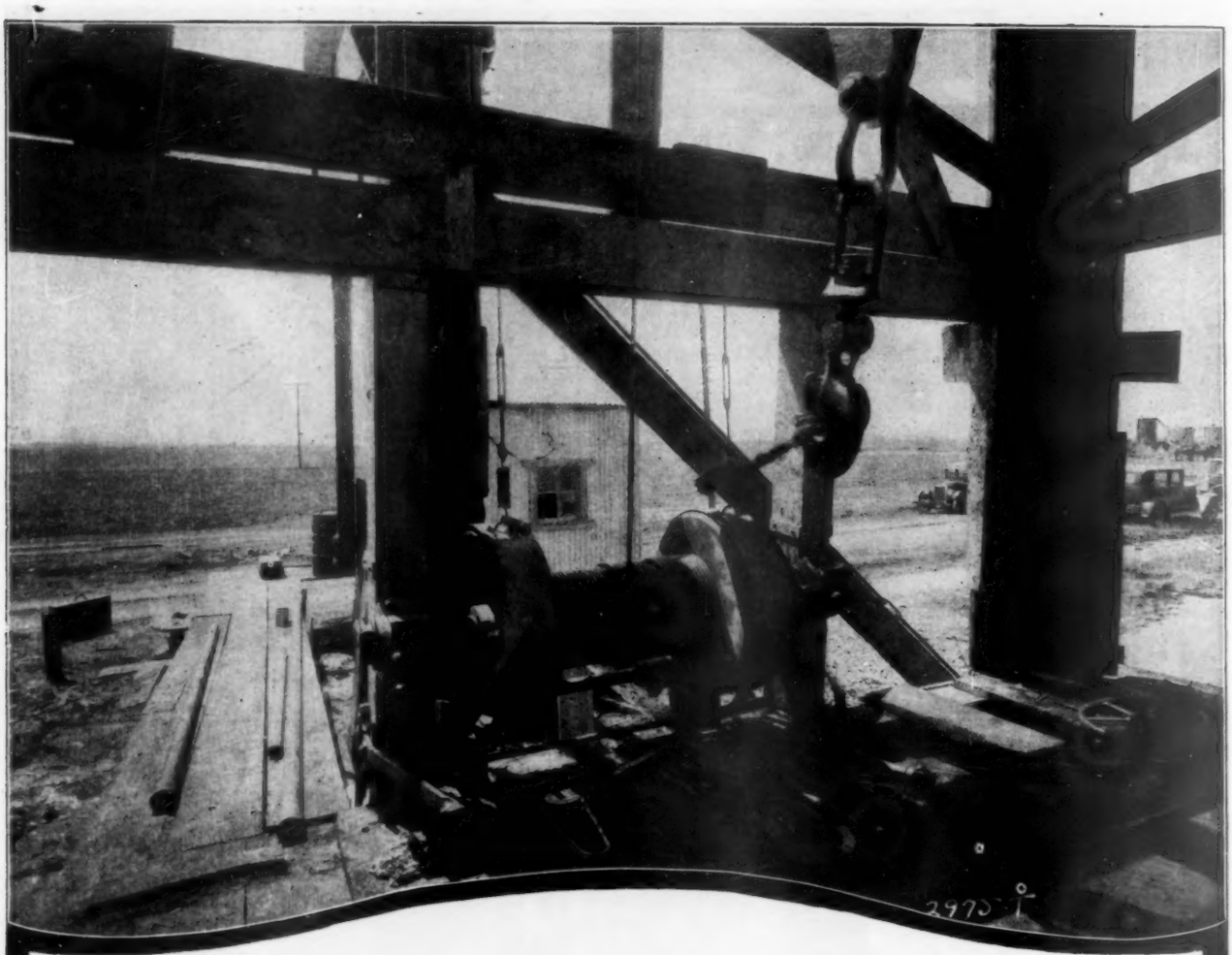

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A Gulf Publishing Company Publication

The OIL WEEKLY

Member Audit Bureau of Circulations

VOLUME 52, NO. 8

FEBRUARY 8, 1929

Edited Weekly at Houston, Texas

SPENCER W. ROBINSON, EDITOR

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Published Weekly
by
GULF PUBLISHING COMPANY

OFFICE OF PUBLICATION
3301 Buffalo Drive, Houston, Texas

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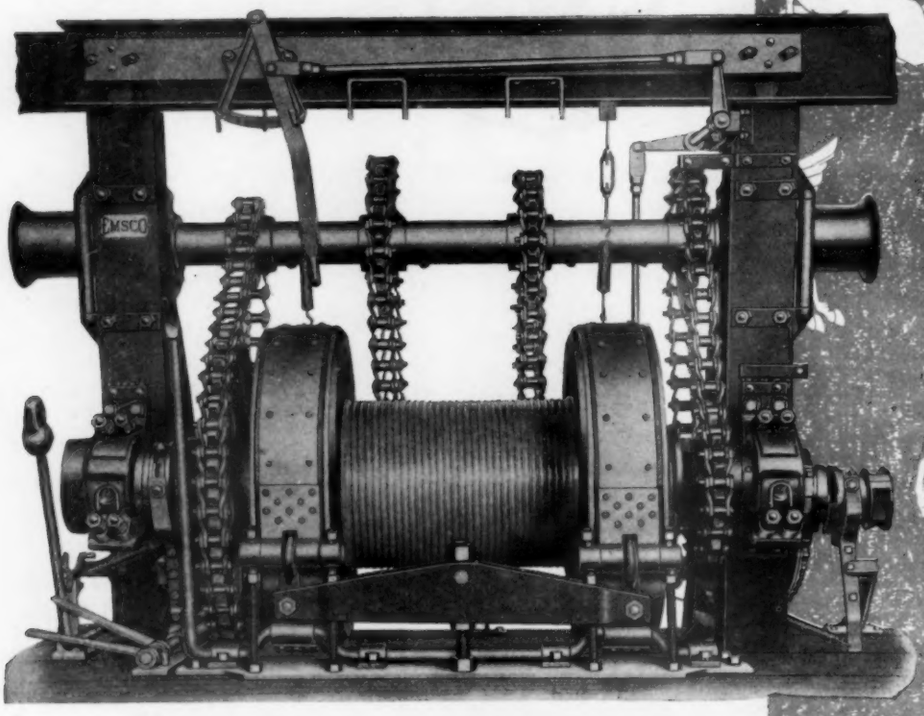
FORT WORTH: 203 W. T. Waggoner Bldg., H. H. King, Manager.

Issued Friday of each week. Single copies 10 cents. Subscription price: Domestic $1.00 a year, Foreign $2.00 a year. Subscription restricted to those engaged in the producing and pipe line branches of the oil business or the manufacture and distribution of oil field supplies. Advertising rates on application.

4 SPEED EMSCO DRAW WORKS



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CONTINENTAL

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

California and Pennsylvania Await Mid-Continent Leadership

ANOTHER gain in daily average crude production last week, amounting to 16,950 barrels, pushed the production curve up to a new high mark of 2,680,050 barrels. If the word "improvement" will spread any cheer, it can be said that there is improvement in the tapering off of net gains; for example, week of January 19, gain 50,550 barrels; week of January 26, gain 18,900 barrels; week of February 2, gain 16,950 barrels. The more optimistic would regard this a sign of improvement, but a careful study of the solid facts at hand gives definite signs that the worst is not past history. As the situation appears at this time, it is almost certain that we can expect further price revisions in the crude market. Last week, it was pointed out that further cuts were anticipated; this week, there is further evidence to substantiate the prediction. A preliminary survey of potential demand for the month of January reveals a sizeable surplus of crude above requirements. With the shortest month of the year already entered with no visible signs of relief in sight, it is a foregone conclusion that the market will necessarily be subjected to further corrective measures.

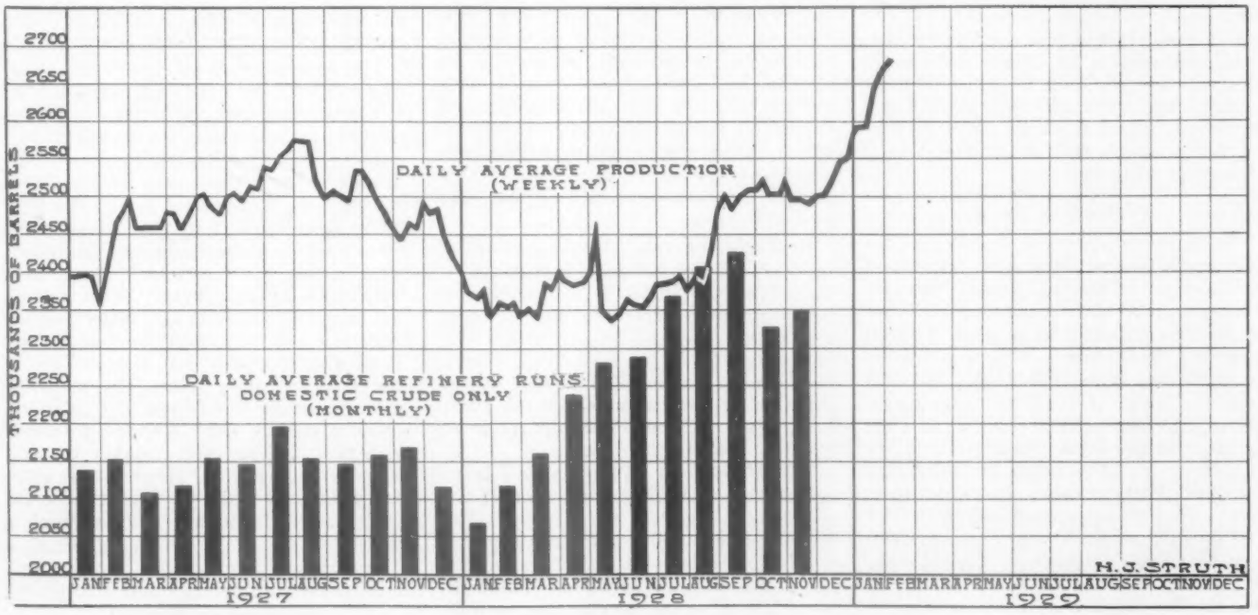
California Getting Worse

The situation in California continues to grow worse and the light oil market is becoming decidedly top-heavy. Santa Fe Springs continues to register sharp gains day by day and operators in that area seem to be oblivious to the inevitable result of their drilling orgy. As a matter of fact, the California light oil price structure is now within the barometric zone which definitely indicates a lower market. The fact that light crude prices have not been reduced up to this time, does not signify that a cut is not justified. It begins to look now as if California purchasing companies are maintaining a watchful, waiting attitude; watchful of the immediate future trend of Santa Fe Springs, and waiting for a signal for further price revisions in the Mid-Continent area. In other words, if there are no further cuts in Mid-Continent crude and Santa Fe Springs shows the slightest inclination to decline, the day will be saved for California and the price of light oil will go unscathed. In the meantime, however, the drills go merrily down to the deep pay while the production curve assumes the angle of a sky-rocket.

Pennsylvania Out of Line

Pennsylvania seems to exhibit a policy similar to that of California; keeping an eye on the Mid-Continent situation in the belief that present prices will hold and enable the market to continue to absorb the present rates in effect for Pennsylvania grade crudes. While the barometer of supply-demand for the Appalachian area continues to reflect a strong position, it also indicates that the price index is somewhat out of line with the other factors. This would indicate that there will be some correction made in that area before

DOMESTIC PRODUCTION AND REFINERY RUNS



DETAILS OF CRITICAL FIELDS

Pool	Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	512	2,834,620	5,536	527	176,865	*336	13	44
Church & Fields.	189	203,465	1,077	187	26,415	141	..	..
Gulf - McElroy.	70	56,225	803	70	12,945	185	1	1
Yates	293	1,946,520	6,598	292	73,275	*251	6	7
Total	1,064	5,040,830	4,738	1,076	289,500	269	20	52
TEXAS PANHANDLE—								
Hutchinson Co..	1,141	549,350	482	1,015	26,650	26	4	24
Gray County ..	325	134,730	415	315	23,285	74	9	42
Carson County .	183	60,245	329	159	5,995	38	3	15
Wheeler County	44	14,645	333	35	710	20	9	15
Moore County .	10	6,125	612	8	2,450	306	5	5
Total	1,703	765,095	449	1,532	59,090	39	30	101
OKLAHOMA—								
Seminole	1,663	2,146,689	1,291	1,343	295,268**	219	49	257
St. Louis	356	367,610	1,033	303	129,843	428	20	58

*Production partially pinched. **Mission partially pinched.

long, although action may be deferred until the initiative is taken again in the Mid-Continent section.

Oklahoma Proration

Another constructive step was initiated by Oklahoma operators on February 5, when a definite agreement was promulgated to limit production of the state to 650,000 barrels a day. Ray Collins, umpire, has done splendid work in his territory in the past, but it remains to be seen what the outcome will be under the newly organized plan. The whole trouble with proration efforts up to now has been the lack of wholehearted support of these agreements by all concerned. Another factor that has seriously hampered these efforts has been the inability of the umpire to extend control to wildcat territory. Thus, when a new area is opened up, the fellows who are holding back their production become weary of letting others proceed at top speed in new territory and finally decide to break their former agreement. It will take a lot of enthusiastic supporters to obtain the results desired in Oklahoma. It looks as though the most effective way to get everyone in line to carry out their part of the program will be to post a final reduction in the market.

Production Gains

Gains were reported last week in Texas, Oklahoma, Mountain States and California. Crane-Upton, Howard, Pecos and Winkler Counties, in West Texas, contributed to a gain of 2600 barrels a day, while Salt Flat, in Southwest Texas, registered a gain of 4000 barrels daily. In Oklahoma, Little River, St. Louis, Allen and Maud contributed to the total gain registered for the state, Maud showing an individual gain of 3650 barrels. In California, Santa Fe Springs output increased 10,000 barrels, while Ventura gained 2000 and Elwood 1500 barrels. Salt Creek, Wyoming, contributed most of the gain for the Mountain States, other fields in that area showing slight declines. The total of all increases amounted to 19,950 barrels, while the declines aggregated 3000 barrels, making a net gain for the week of 16,950 barrels.

Street rumors the past week in Tulsa were to the effect that another cut in the price of light grade crudes in the Mid-Continent could be expected. Both crude and refined stocks continue to accumulate at an alarming rate, with absolutely no prospects for any immediate reduction.

During the week practically all major operators in Oklahoma met in Tulsa and signed a pact to agree to the use of conservation in the state. They pointed out that there is from 50,000 to 75,000 barrels of production in excess of consumption at this time.

The next few weeks will be important ones for the Mid-Continent light oil market. Unless operators of the Mission field decide to withhold the drilling in of more than two score tests now on top of the sand in that pool when they meet that area will be opened and will throw considerable new production on the market, although it is now expected to fall far below earlier anticipations. Indications are that a larger number of the tests at Mission may be disappointing than now indicated.

Recently the market was somewhat relieved by the temporary removal of the Allen field from the picture due to the completion of several dry holes in the Wilcox sand. The discovery well has only 17 feet of pay sand, having drilled into water. The district is far from being permanently defined, however, and no immediate outbreak of fresh drilling is threatening.

The Maud field still remains a large potential factor. The production of the pool has been built up to more than 30,000 barrels daily, most of which is from the Hunton-Misener sands. To date, the Wilcox sand has failed to yield anything of a startling nature. This pool is the most active in the Seminole district, having 122 operations.

Kansas is a very important element, but its resources are so indefinite at this time as to make any prediction a wild, hazardous guess. Indications are that the big drilling play will result in a lot of new production.

The average price of U. S. Motor gasoline in Group 3 is now 7 cents a gallon. The market continues to be very slow due largely to freezing weather. Other grades of gasoline were off in proportion.

Kerosene, 41-43 water white grade, is quoted from 5 to 5¼ cents per gallon. Fuel oil is slightly weaker. Gas oils are slightly stronger, 32-36 grade bringing 3 cents a gallon. Distillates are in good condition commanding 3¾ to 4 cents a gallon.

Magnolia Petroleum Company reduced the tank wagon price throughout Oklahoma, excepting Tulsa, 1 cent a gallon during the week. This still leaves the price outside of Tulsa one cent higher. The Tulsa tank wagon is 16 cents and 19 cents at the service stations, while elsewhere in the state the tank wagon price is 17 cents compared with a service station price of 20 cents.

North Texas

Rumors of further downward revision of Mid-Continent crude prices and an unusually wide range of gasoline price quotations are contributing factors in the bringing about of a general curtailment of buying by domestic jobbers. U. S. Motor gasoline, which is averaging about 6½ cents per gallon at North Texas plants and a half cent less at West Texas refining points, is enjoying very little activity, and stocks are piling up at such a rate that present prices can hardly be expected to hold. However, the fuel oil market in the North Texas district is taking the opposite course, and considerable trading is underway with the standard grade netting the plant owners about 65 cents per barrel, or about 15 cents above the average price received last December.

The crude situation in Texas as a whole is firm, with only a few soft spots in the market, and the latter are being cleared up through independent refiners making contracts for tank car shipments although the Texas Panhandle district was hard hit by the last crude price reduction, the competition for crude is noticeable and a more sound crude price structure prevails in the North Texas, Central West Texas and East Central Texas districts but increased production in the Southwest Texas districts lately has afforded more low gravity crude than major companies desire at the 8-cent price. Independent buyers have stepped forward with tank car racks to market the oil with distantly located refineries, or ship the crude via rail on low tariffs to Gulf Coast terminals for coastwise movement.

The West Texas district, where the bulk of the oil averages about 30 grav-

(Continued on page 48)

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October	741,350	97,900	598,550	129,950	38,800	83,550	114,000	83,300	624,450	2,511,850	77,867,800
November	715,750	96,600	586,350	135,100	38,600	83,000	109,700	81,150	653,050	2,499,300	74,978,300
December	710,610	97,110	603,370	14,010	37,330	81,330	113,480	74,550	697,790	2,557,900	79,295,150
1929											
Jan. 5	719,750	97,100	615,250	136,400	36,400	80,200	113,250	78,100	714,600	2,591,050	18,137,350
Jan. 12	717,950	97,150	618,400	137,500	36,650	79,150	112,500	72,550	721,800	2,593,650	18,155,250
Jan. 19	723,650	97,150	630,950	138,250	36,300	78,250	111,750	74,600	753,300	2,644,200	18,509,400
Jan. 26	723,650	97,350	637,750	139,900	36,350	78,100	111,600	70,100	768,300	2,663,100	18,641,700
Feb. 2	728,700	96,800	641,100	139,550	35,950	77,400	110,600	71,850	778,100	2,680,050	18,760,350
Increase	5,050	.....	3,350	.....	.....	.....	.....	1,750	9,800	16,950	118,650
Decrease	.....	550	.....	350	400	700	1,000	.....	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Feb 2	Jan. 26
Carson County	6,000	5,850
Gray County	23,300	23,650
Hutchinson County	27,100	27,500
Wheeler County	700	800
Others	2,500	3,400
Total	59,600	61,200

NORTH TEXAS

Archer County	17,700	17,900
Burkburnett	9,300	9,200
Electra	13,450	13,500
Iowa Park-KMA	6,000	6,400
Montague and Cooke Counties	9,700	9,750
Wilbarger	28,450	28,850
Others	500	550
Total	85,100	86,150

WEST CENTRAL TEXAS

Brown County	9,250	9,300
Callahan County	3,500	3,600
Coleman County	3,250	3,300
Eastland-Desdemona	6,000	6,750
Jack County	1,700	1,750
Palo Pinto County	400	400
Shackelford County	11,650	11,700
Stephens County	6,500	6,750
Throckmorton County	700	700
Young County	7,700	7,800
Others	700	700
Total	52,050	52,750

WEST TEXAS

Crane-Upton Counties	51,000	49,750
Crockett County	2,400	2,500
Howard County	41,150	40,800
Jones County	7,000	7,100
Mitchell-Scurry Counties	2,400	2,650
Pecos County	74,200	73,050
Reagan County	19,000	19,200
Winkler County	177,300	176,900
Others	1,600	1,500
Total	376,050	373,450

EAST CENTRAL TEXAS

Boggy Creek	2,750	2,500
Corsicana-Powell	9,100	9,700
Currie	500	500
Mexia	5,950	6,000
Nigger Creek	600	600
Richland	500	500
Wortham	1,400	1,400
Total	20,800	20,700

SOUTHWEST TEXAS

Dale	700	750
Laredo District	12,000	11,500
Luling	13,100	13,000
Lytton Springs	1,000	1,100
Somerset	600	650
Salt Flat	17,550	15,300
Others	2,550	1,200
Total	47,500	43,500
T'tl Tex. (Outside Gulf Coast)	641,100	637,750

TEXAS GULF COAST

Barbers Hill	3,250	2,000
Batson	1,350	1,300
Big Creek	5,000	4,000
Blue Ridge	4,350	4,700
Boling	2,300	2,300
Damon Mound	950	950
Goose Creek	6,300	6,250
Hull	9,850	10,100
Humble	4,800	5,000
Orange County	3,100	3,100
Pierce Junction	11,950	12,100
Raccoon Bend	2,000	1,900
Saratoga	1,000	950
Sour Lake	2,900	2,800
South Liberty	2,250	8,650
Spindle Top	32,950	34,250
Sugar Land	7,600	7,650
West Columbia	7,100	7,100
Others	5,000	3,500
Total	119,000	118,600
Texas Total	760,100	756,350

OKLAHOMA

Braman	3,700	3,850
Logan County	14,250	14,950
Blackwell	4,150	4,100
Hubbard	1,900	2,150
Thomas	950	950
Tonkawa	10,950	11,200
Garber	6,300	6,300
Burbank	23,000	23,300
Osage (outside Burbank)	26,100	26,200
Cushing	20,650	20,750
Yale Jennings	7,700	7,750
Davenport	1,650	1,650
Bristow Slick	19,000	19,050
North Okmulgee	14,200	14,250
Lyons Deaner	8,000	8,000
Cromwell	8,100	8,100
Papoose	3,500	3,500
Wewoka	5,350	5,400
Seminole	39,600	40,400
Bowlegs	42,400	42,000
Searight	9,200	8,550
Little River	101,900	100,100
Earlsboro	66,200	68,050
Duncan District	7,300	7,300
Graham	4,500	4,500
Fox	1,500	1,500
Healdton	13,200	13,200
Hewitt	8,700	8,750
Scholem Alechem	13,750	13,900
Pearson	1,600	1,650
St. Louis	129,850	128,500
Allen	29,500	27,900
Maud	34,950	31,300
Oklahoma City	5,650	5,700
Mission	750	900
Others	38,700	38,000
Total	728,700	723,650

CALIFORNIA

Santa Fe Springs	175,000	165,000
Long Beach	178,000	181,000
Huntington Beach	49,000	49,000
Torrance	15,000	15,000
Dominguez	10,000	10,000
Rosecrans	6,500	6,500
Inglewood	27,000	27,000
Midway-Sunset	73,000	73,000
Ventura Avenue	57,000	55,000
Seal Beach	31,500	32,000
Elwood-Goleta	20,000	18,500
Kettleman Hills	3,800	4,000
Others	132,300	132,300
Total	778,100	768,300

KANSAS

Greenwood County	22,750	22,800
Florence-Covert	900	900
Peabody-Ebling	3,250	3,250
Eldorado-Towanda	12,300	12,400
Augusta-Fox Bush	2,950	2,950
Rainbow Bend	1,100	1,100
Russell	3,400	3,450
Churchill	7,400	7,500
Oxford	6,350	6,250
Sedgewick	6,700	7,250
Others	29,700	29,500
Total	96,800	97,350

NORTH LOUISIANA

	Feb 2	Jan. 26
Homer	4,050	4,050
Haynesville	5,500	5,550
Caddo Light	8,800	9,050
Caddo Heavy	2,750	2,800
DeSoto-Red River	4,000	4,050
Elm Grove	600	600
Bellevue	750	750
Cotton Valley	3,250	3,250
Uranda	5,550	5,750
Pleasant Hill	500	500
Others	200	...
Totals North Louisiana	35,950	36,350

LOUISIANA GULF COAST

Bayou Boullion	500	400
East Hackberry	5,800	5,750
Edgerly	850	850
Evangeline	800	800
Lockport	3,700	3,900
Sorrento	800	1,100
Sulphur Dome	2,500	2,850
Sweet Lake	500	800
Vinton	4,200	4,000
Others	900	750
Total Louisiana Gulf Coast	20,550	21,300
Louisiana Total	56,500	57,650

ARKANSAS

El Dorado	4,850	4,850
Champagnolle	10,650	10,950
Smackover Light	6,900	6,900
Smackover Heavy	51,050	51,450
Stephens	1,000	1,000
Nevada	1,350	1,300
Lisbon	1,500	1,500
Others	100	100
Total	77,400	78,100

MOUNTAIN STATES

WYOMING

Salt Creek	32,150	29,600
Grass Creek	2,300	2,100
Elk Basin	600	800
Big Muddy	2,350	2,350
Lost Soldier	3,350	3,450
Rock River	2,450	2,300
Lance Creek	300	300
Oregon Basin	2,900	2,900
Others	5,700	6,300
Total	52,000	50,100

MONTANA

Cat Creek	1,450	1,500
Sunburst	6,750	6,750
Pondera	2,700	2,900
Others	...	...
Total	10,900	11,150

COLORADO

Moffats (Craig)	900	1,150
Fort Collins	2,800	2,400
Florence	1,100	1,100
Others	2,100	2,200
Total	6,900	6,850

NEW MEXICO

Table Mesa	...	...
Artesia	1,000	1,000
Hogback	500	500
Rattlesnake	450	400
Others	100	100
Total	2,050	2,000
Total Mountain States	71,850	70,100

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	110,600	111,600

PRODUCTION SUMMARY

East of Rockies	1,830,100	1,824,700
Total U. S.	2,680,050	2,663,100

California and Pennsylvania Await Mid-Continent Leadership

(Continued from page 46)

ity, with a high sulphur content, is enjoying a better crude market situation as competition becomes more active among the major purchasers. A heavy turnover of large crude connections has taken place since the first of the year, while a number of new crude contracts are being made public involving crude from Winkler, Pecos and Howard Counties. New contracts requiring tank car shipments carry a pipe line gathering and delivery charge to racks in addition to the posted price, while one year ago a number of contracts were made by producers, mostly in Winkler County, that carried the field posted price loaded on buyers cars at distant racks.

California

The chief concern in California is centering around the ability of the market to absorb the increasing flow of crude from the critical fields and the likelihood of a rapid decline of production to a point below 700,000 barrels. The state total has passed 760,000 barrels, but the dizzy pace of the past two months should not be maintained many weeks hence. The crude market has been absorbing the light oil in good shape but the supply has already far exceeded the immediate demand for the heavier products.

Fuel oil, which has a more important bearing on the crude market than is commonly thought, is piling up as the result of the overflow of the heavier products from the light oil. Crude in California is almost exclusively straight run, giving the fuel oil stocks a boost as refinery operations are increased to handle the light oils.

Santa Fe Springs is forging steadily ahead, but the peak seems just around the corner, unless a deeper sand is found productive. The Buckbee and Intermediate zones are already defined and many new wells will be needed to shove production much higher. The peak probably will not exceed 225,000 barrels, but the decline will be slower than anticipated, according to the latest estimates.

The new Elwood field, in Santa Barbara County, is quietly assuming a prominent place in the light oil column. Only six wells have been completed, yet production exceeds 24,000 barrels of 38 gravity oil. Ideally located, this field can readily ship by tanker or rail all of its output. Each shipload of this light oil contains almost twice as much gasoline as a similar cargo of heavier crude, thus detracting the attention of the purchasers from other California ports to this field.

The gasoline war wages merrily on in California. The "independents" are attempting to meet the price cuts of the company-owned stations, reconciling themselves to the lower scale. There is little or no profit in the retail sale of gasoline at the present price scale and a return to a price equal to or not far below the recognized "standard" scale is anticipated.

The increased production of natural gasoline has not had a beneficial effect on the wholesale price of gasoline. This product is extensively blended with the straight run gasoline and an over-production is reflected in the entire gasoline market.

Little has been heard of curtailment during the past month. Efforts are being made to reach an agreement concerning the conservation of both gas and oil in the Santa Fe Springs field, but nothing definite has been accomplished.

Meetings of Interest to Producers

FEBRUARY 20-21:
American Institute of Mining and Metallurgical Engineers, Petroleum Division, New York.

FEBRUARY 23:
Executive meeting of the National Oil Scouts Association, Texas Hotel, Fort Worth, 2:30 p. m.

FEBRUARY 26:
Natural Gasoline Association of America, Plant Operators Meeting, American Legion Hall, Ranger, Texas.

MARCH 21-22-23:
American Association of Petroleum Geologists, Fort Worth.

APRIL 3-4:
American Petroleum Institute, Division of Development and Production Engineering, Texas-Louisiana-Arkansas Division, Baker Hotel, Dallas.

MAY 6-7-8-9:
American Gas Association, Natural Gas Department, Kansas City.

MAY 20-21-22:
Natural Gasoline Association of America, Mayo Hotel, Tulsa.

Complete Boggy Creek Pipe Line

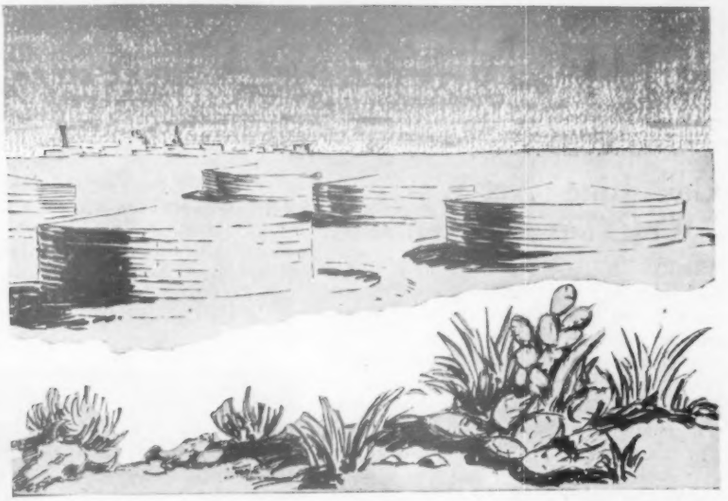
Houston, Texas.—Humble Pipe Line Company has completed construction of a 74-mile eight-inch pipe line, extending from the Boggy Creek field, Anderson County, Texas, to Groesbeck, where connection is made with its Central Texas system leading to Coast terminals. The testing of the line was underway early this week, and it will be put into operation on short notice, as tank construction has been retarded in the field since the line was authorized built in November, 1928. This line is the only direct market outlet for the field, which is almost entirely owned and controlled by the Humble Oil & Refining Company, the discoverer. The field is producing high gravity oil, and is now averaging about 2700 barrels daily from nine wells, partially pinched.

Yates Field Crude Moves to Shreveport

Fort Worth, Texas. — Shipment of 5000 barrels daily, or a total of 140,000 barrels of Yates field crude for the month of February, has been started by the Mid-Kansas Oil & Gas Company from its tank car rack at Del Rio, Texas, to the Shreveport, Louisiana, plants of the Louisiana Oil Refining Corporation at a reported price of 90 cents per barrel loaded on tank cars. This oil is transported from the field to the rack by the Illinois Pipe Line Company, which has a gathering and transportation tariff of 20 cents per barrel on Yates crude moving to Del Rio. The current posted price for Yates crude is 65 cents per barrel. The tank car shipments are being routed over the Southern Pacific lines via Houston to Shreveport on a tariff of 16 cents per 100 pounds.

Murchison Interests Form New Company

Dallas, Texas. — Producing properties held by the Murchison Oil Company, which maintains headquarters here in Winkler, Cooke and Wilbarger Counties, and in Southwest Texas, have been transferred to a newly formed subsidiary known as the Texas State Oil Company. The Murchison Oil Company will continue to engage in oil production. The headquarters of the Texas State Oil Company will be established shortly in Fort Worth, with Earnest M. Closuit, who formerly was chief geologist for the Gulf Production Company in the North Texas district, in active charge of operations. The company is capitalized at $750,000, with the following officers: Clint W. Murchison, Dallas, chairman of the board; Earnest M. Closuit, president; T. F. Murchison, Dallas, vice-president; and H. V. McConkey, Dallas, secretary-treasurer. John T. Gay, formerly Yates field production foreman for Gulf Production Company, will be superintendent of production, with headquarters at Wink, Texas.



STOP FIRE AND EVAPORATION LOSSES

With WIGGINS FLOATING ROOFS

This roof rises and falls with changing oil level, effectively separating oil and air and thereby minimizing the tendency to evaporate and the possibilities of fire. It stops filling and emptying losses and daily breathing. Ordinarily pays for itself in a year or less.

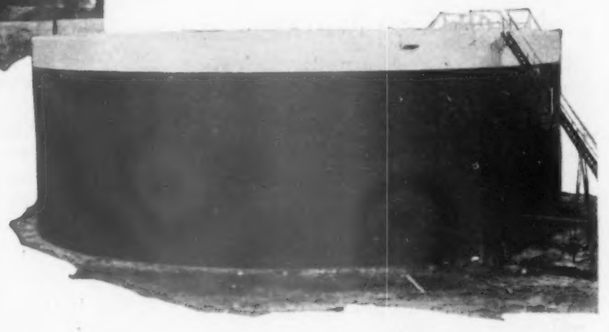
A 25,000,000 bbl. oil loss deserves prompt and drastic action. That's a conservative estimate of the toll taken annually by evaporation.

While the conditions which favor evaporation may sometimes be controlled, it is impossible to stop the operation of this natural law. But the resulting loss of valuable vapor can usually be stopped or at least greatly reduced. The same measures which stop evaporation are also effective in preventing fire.

The varying conditions under which crude oil and refined products are exposed to the ravages of evaporation and fire call for different measures to stop these losses. Recognizing this fact, two types of roof for standard tanks and one special type of spherical container are offered. The three sets of conditions under which these three designs are effective cover practically all common practice. We will gladly furnish complete data on these types of equipment and show you lists of the leading companies using them.

or THE HORTONSPHERE *for highly volatile liquids*

This spherical container permits the storage of volatile oil under pressure sufficient to maintain its liquid state.



or WIGGINS BREATHER ROOFS *for standing storage*

This roof flexes up and down with changes in vapor volume. Daily thermal breathing is eliminated in tanks held nearly full, for this roof provides ample flexibility in volume to accommodate the vapor without loss.

CHICAGO BRIDGE & IRON WORKS

Dallas, 3338 Magnolia Bldg.
Chicago, 2142 Old Colony Bldg.
New York, 3144 Hudson Terminal Bldg.
Cleveland, 2241 Union Trust Bldg.
Detroit, 1515 Lafayette Bldg.
Philadelphia, 1613 Jefferson Bldg.
San Francisco 1050 Rialto Bldg.
Havana, Cuba, Apartado 2507

OW2-8-Gray

THE NATURAL GAS INDUSTRY

Gas Line Net-Work in West Texas Extended

Dallas, Texas.—The Southern Union Gas Company has completed construction work on an extension of its West Texas natural gas system from Pyote to Pecos, a distance of about 24 miles, and natural gas from Winkler County wells will be delivered to domestic and industrial consumers at Pecos about March 1. Six-inch pipe was used in the Pyote-Pecos extension line, and tentative plans are to lay a second line direct from the Hendrick field to Pecos in the near future. Distributing systems are also to be layed shortly in Barstow and Monahans to supply gas to homes, thus hooking up all the little towns and refineries located to the southeast, south and southwest of the Hendrick field.

A small network of gas lines are also being built by the Southern Union Gas Company in South Central Texas, having contracted for a gas supply in the Raccoon Bend field, Austin County, and gas will be delivered into Brenham about the middle of February via 16 miles of six-inch line. A 16-mile four-inch line will be extended from Brenham to Somerville, with a four-mile four-inch lateral line to Somerville. An eight-mile four-inch line direct from the field to Hempstead is also under way. Booster stations are not to be used on either of the above two separate systems, as a rock pressure of more than 900 pounds is available at the wells.

Headquarters of the Southern Union Gas Company are located in the American Exchange National Bank Building, Dallas, and the company is affiliated with the Murchison Oil Company. C. C. Tucker is superintendent of gas line operations, with headquarters at Pyote, while M. Ulmer is in charge of construction work, with temporary offices at Pecos.

Texas Iron Development Makes Gas Market

Shreveport, La.—Henry L. Doherty Company, large producer and distributor of natural gas in the Southwest, has secured a 25 year lease on a 10,000 acre tract of iron ore lands in Cass County, East Texas. The lands was acquired from the Texas Iron Company and the deal contemplates extensive development of the properties and the construction of iron and brown ore and carbonate ore washing and roasting plants of not less than 1000 tons of roasted ore daily capacity.

This project will create an additional important market for industrial gas and it is regarded as likely that the Doherty gas subsidiaries operating in this vicinity will furnish gas for the plants. The acreage is located near the Waskom gas area in Harrison County, Texas, and Caddo Parish, Louisiana, and is also in close proximity to the Panola County gas area. The agreement contemplates construction of ore plants within the next 30 months and contains a forfeiture clause whereby Henry L. Doherty & Company agrees to pay $1,000,000 in the event the contract is not carried out as specified.

E. N. WATKINS

Watkins Promoted

Announcement has been made by Mr. D. W. Harris, general manager, of the election of E. N. Watkins, formerly general auditor of the Arkansas Natural Gas Corporation, as secretary of the Arkansas Natural Gas Corporation and its subsidiaries, to take the place of Joseph Zeppa, who is leaving Shreveport to accept the vice presidency of the MacMillan Petroleum Company, Los Angeles.

Mr. Watkins joined the Empire Companies in Bartlesville in 1921. In 1926 he was sent as auditor to El Dorado, Arkansas, where the Doherty interests had acquired the Natural Gas & Fuel Corporation. He was later promoted to assistant secretary-treasurer and after the merger with the Arkansas Natural Gas Corporation was elected assistant treasurer and moved to Shreveport in March, 1928. At the time of his election as secretary he was general auditor of the Arkansas Natural Gas Corporation. The offices of the Arkansas Natural Gas Corporation occupy three floors of the Ardis Building in Shreveport, with branch offices in all the towns and cities in North Louisiana and South Arkansas, where they furnish gas between Shreveport and Little Rock.

Gas Meter Short Course Announced

Norman, Okla.—The sixth Southwest Gas Meter Short Course will be held on April 16, 17 and 18 at the University of Oklahoma, it was decided at a recent meeting of the executive committee for the course. The state corporation commission will assist the school of mechanical engineering at the university in conducting the three-day school.

The Engineering building will house all equipment loaned by the gas utility manufacturers for demonstration work in conjuction with the classroom instruction. Although many makers of gas meters are taking advantage this opportunity to demonstrate their latest equipment for the benefit of those taking the course, no sales talk will be allowed, executive committee members remarked.

To cover registration and banquet expenses, a three-dollar fee will be charged. The course is to be directed by Prof. W. H. Carson, head of the school of mechanical engineering at the University.

Last year, more than 300 utility men attended the sessions, 25 per cent. of whom were from states other than Oklahoma. Gas officials from all parts of the United States have been attracted to this annual school, which is the largest of its kind held anywhere.

California Consumption

Los Angeles.—Natural gas utilized in California during 1928 totaled 350 billion cubic feet, according to a preliminary report issued by the State Mining Bureau. The value of this gas was about $31,000,000, or almost $12,000,000 greater than the 225 billion cubic feet used during 1927. Almost one billion cubic feet was used daily for all purposes. The accounting does not allow for the enormous quantities blown to the air. The value of the gas was about 11½ per cent. of the total valuation of both gas and oil produced.

Washington, D. C.—Legislation continuing available until June 30, 1930, the unexpended portion of the appropriation of $50,000 made for the expenses of the Federal Oil Conservation Board in 1925 has been recommended to the House of Representatives by President Coolidge.

The president's recommendation has the approval of the director of the Budget Bureau in a report which stated there now remains a balance of approximately $25,000. The board is now preparing a third report, embodying a survey of world-wide conditions, and as the work has not been completed it is considered important that the appropriation be continued available during the fiscal year 1930.

PERSONAL MENTION-MEN YOU KNOW

R. M. Dinges, of the Continental supply Company, and J. A. Mussler, of the Youngstown Sheet and Tube Company, will leave New York the first week in February to visit the oil fields in South America in behalf of their respective companies. For the information of various friends who may want to communicate with these gentlemen, they have informed us that correspondence will reach them in care of the American Counsel at Maracaibo, Venezuela.

Paul A. Langford, who has been assistant general attorney for the Marland Companies in Texas for the past five years, has resigned effective February 1 to enter the practice of law, specializing in oil matters, with headquarters in Fort Worth. Langford will be associated with Chas. L. Morgan and E. E. Hubman, and offices are located on the 12th floor of the W. T. Waggoner Building.

C. E. Jackson, former assistant to R. F. Fike, head of the automotive transportation department of the Mid-Continent Petroleum Corporation, has been promoted to the position of division superintendent of the motor transport department with headquarters in St. Louis.

John E. Walker, for a number of years a sales representative of the Continental Supply Company, is now with the Ash Grove Lime and Portland Cement Company. His headquarters will be in Tulsa.

J. L. Dittman, Mid-Continent representative of the Wall Rope Works, Inc., has just returned from a visit to the general offices at New York City.

George Belchic, vice-president of Belchic & Laskey, Inc., of the Peoples Gas & Fuel Company, and of the Northwest Louisiana Gas Company, was elected acting vice-president of the Shreveport Geological Society Friday night succeeding A. L. Selig of the Southern Crude Oil Purchasing Company, recently transferred to Fort Worth. Mr. Belchic's election by acclamation was unanimous.

A. W. Dillard, who has been assistant superintendent of the land department for the Marland Oil Company with headquarters at Ponca City, has accepted position with Simms Oil Company, Dallas, as assistant superintendent of the land department.

C. B. Bunte, geologist and oil operator, and Billy Martin, oil operator, from Okmulgee, Oklahoma, have opened offices in the Tulsa Trust Building in Tulsa.

F. C. Shugart, has returned from a trip to the lapweld and seamless mills of Spang Chalfant & Company, which is preparatory to promotion work which he will do for the company in Texas. He will make Sweetwater his headquarters.

E. R. Turner, formerly of The Texas Company, has joined The Marland Production Company, as assistant to E. J. Nicklos, vice-president, and in charge of production. Turner joined The Texas Company in April, 1915, and has been active in that company since, except for a period during the World War in which he was a captain.

John McKeon, formerly vice-president of the Richfield Oil Company and head of the producing department, has resigned to become an independent operator. Mr. McKeon was one of the best known and best liked of California oil executives. He built up a modest drilling company to a large producing organization in a few years, selling his interests to the Richfield Oil Company.

Kendall Winship has been elected a third vice-president of the Gypsy Oil Company, with headquarters in Tulsa. Winship was formerly in charge of the company's Venezuelan operations.

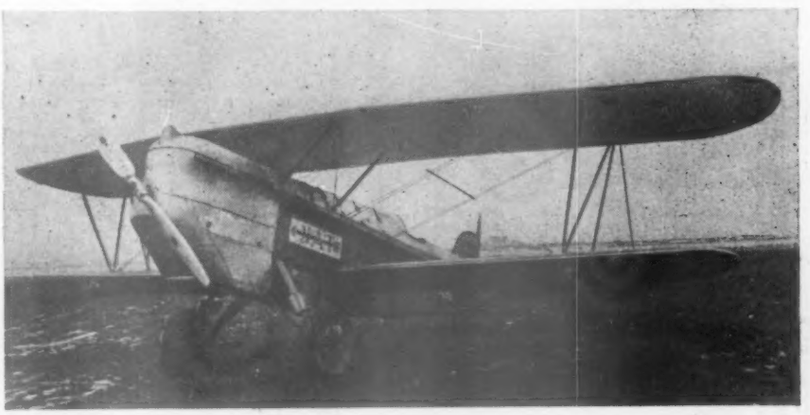
E. J. Stepheny of Pittsburgh, recently appointed secretary of the Natural Gas Department of the American Gas Association, was a recent visitor in Tulsa and Bartlesville, Oklahoma.

W. H. Wallace, formerly clerk of the purchasing department of the Empire Oil & Refining Company at Bartlesville, is now with the Tulsa Rig, Reel and Manufacturing Company with headquarters in Tulsa.

Fred Johnson, driller for Woods & Bennett, Gulf Coast operators, for the past four years, was injured January 31 while working on a drilling rig in Humble field. Johnson was thrown against moving machinery after becoming entangled by a control line on the rotary rig. He was transferred to a Houston hospital, where his injuries were pronounced as not extremely serious.

Fort Worth, Texas.—Annual meeting of the executive committee of the National Oil Scouts Association of America will be held here at 2.30 p. m. February 23 in The Texas Hotel, for the purpose of selecting the city and date for the holding of the 1929 convention. According to John H. Langston, chief scout for the Sun Oil Company, Dallas, and secretary-treasurer of the association, the cities of San Angelo, Houston and Fort Worth are the principal contenders for the two-day meeting, while several other points have asked to be considered.

The officers of the association are: G. R. Nicholson, Empire Gas & Fuel Company, Amarillo, president; Ford Turner, Pure Oil Company, San Angelo, and R. C. "Bob" Edwards, Gulf Refining Company, Shreveport, vice-presidents; John H. Langston, secretary-treasurer; and R. T. Lutz, Humble Oil & Refining Company, Wichita Falls, chairman of the executive committee.



The National Air Transport, Inc., has recently added some new planes to its service between Fort Worth and Chicago which have been successfully flown at the rate of three miles per minute and have made the run from Chicago to Dallas in an actual flying time of six hours and twenty-three minutes. The above picture shows a Falcon mail plane, which is an adaption of the Falcon attack plane, now used by the National Air Transport, Inc.

CRUDE OIL PRICE QUOTATIONS

(Revised to February 5, 1929)

CRUDE PRICE CHANGES

Effective January 30, The Texas Company reduced Markham crude 10 cents a barrel, making the new price 90 cents.

EASTERN STATES

(Effective January 25, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$4.10
Brandford District Oil in National Transit Lines (Pennsylvania)	4.10
Penna Grade Oil in National Transit Lines (Pennsylvania)	4.00
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	4.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.45
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.75
Somerset Oil in Cumberland Pipe Line lines (Kentucky)	1.75
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (Effective Jan. 29, 1929)	.60
Keister (Pennsylvania)	1.20

CENTRAL STATES

(Effective January 25, 1929)

Posted by Ohio Oil Co.

Illinois	1.45
Indiana	1.27
Lima	1.50
Plymouth	1.18
Princeton	1.45
Waterloo	1.25
Wooster	1.62

WESTERN KENTUCKY

(Effective January 25, 1929)

All grades	1.53

MID-CONTINENT

(Effective January 25, 1929)

Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.

25 to 25.9gravity	.66
26 to 26.9 gravity	.72
27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 and above	1.44

MID-CONTINENT

(Effective January 24, 1929)

Magnolia Petroleum Company

Under 26	.60
26 to 26.9 gravity	.65
27 to 27.9 gravity	.70
28 to 28.9 gravity	.75
29 to 29.9 gravity	.80
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.00
32 to 32.9 gravity	1.08

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

PANHANDLE

(Effective January 24, 1929)

GRAY COUNTY

(Humble Oil & Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company and Sinclair Pipe Line Company).

Below 29 gravity	.69
29 to 29.9 gravity	.75
30 to 30.9 gravity	.81
31 to 31.9 gravity	.87
32 to 32.9 gravity	.93
33 to 33.9 gravity	.96
34 to 34.9 gravity	.99
35 to 35.9 gravity	1.02
36 to 36.9 gravity	1.05
37 to 37.9 gravity	1.08
38 to 38.9 gravity	1.11
39 to 39.9 gravity	1.14
40 to 40.9 gravity	1.17
41 to 41.9 gravity	1.41
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.51
44 and above	1.56

WHEELER COUNTY

(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.70
30 to 30.9 gravity	.76
31 to 31.9 gravity	.82
32 to 32.9 gravity	.88
33 to 33.9 gravity	.91
34 to 34.9 gravity	.94
35 to 35.9 gravity	.97
36 to 36.9 gravity	1.00
37 to 37.9 gravity	1.03
38 to 38.9 gravity	1.06
39 to 39.9 gravity	1.09
40 to 40.9 gravity	1.12
41 to 41.9 gravity	1.15
42 to 42.9 gravity	1.18
43 to 43.9 gravity	1.21
44 and above	1.24

CARSON-HUTCHINSON COUNTIES

(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.72
32 to 32.9 gravity	.78
33 to 33.9 gravity	.81
34 to 34.9 gravity	.84
35 to 35.9 gravity	.87
36 to 36.9 gravity	.90
37 to 37.9 gravity	.93
38 to 38.9 gravity	.96
39 to 39.9 gravity	.99
40 to 40.9 gravity	1.02
41 to 41.9 gravity	1.05
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.11
44 and above	1.14

WEST TEXAS

(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Pecos and Winkler Counties, all grades	.65

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties. The Marland Company posts only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

CALIFORNIA CRUDE OIL PRICES AT THE WELL

(EFFECTIVE JANUARY 18, 1929)

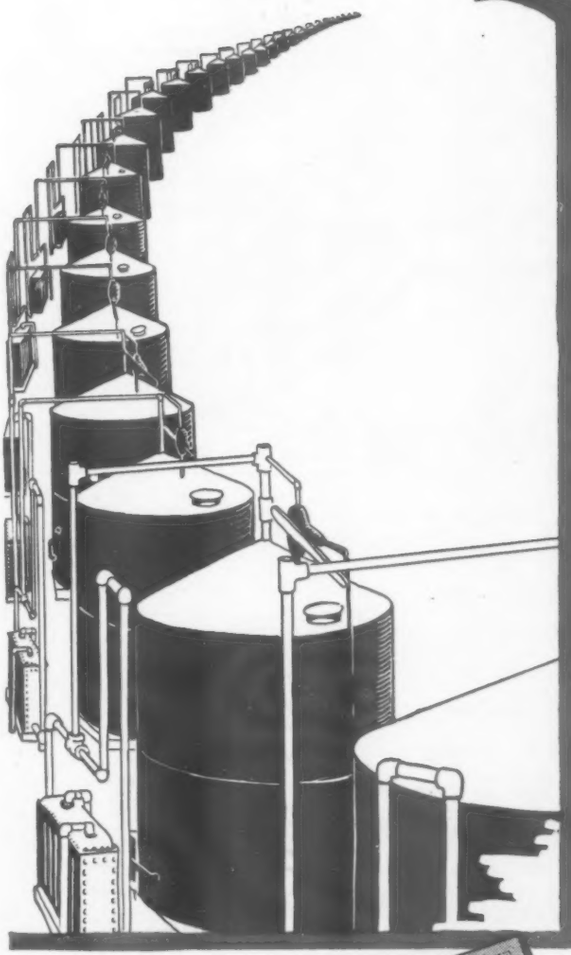
Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity	Signal Hill	Alamitos Heights-Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ 70	$ .70	$ .70	$ .70	..	$ .50	$ .50	$ .50	$ .50	$ .50	$ .50
15-15.9	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
16-16.9	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
17-17.9	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
18-18.9	.75	.75	.75	.75	.75	..	..	.75	.75	.75	.70	.75	..	.50	.56	.56	.56	.56	.56
19-19.9	.80	.80	.80	.80	.80	..	..	.80	.80	.80	.75	.80	..	.50	.62	.62	.62	.62	.62
20-20.9	.85	.85	.85	.85	.85	..	..	.85	.85	.84	.80	.84	..	..	.68	.68	.68	.68	.68
21-21.9	.89	.89	.89	.89	.89	..	..	.89	.89	.88	.85	.88	.89	..	.74	.74	.74	.74	.74
22-22.9	.93	.93	.93	.93	.93	..	..	.93	.93	.91	.90	.91	.92	..	.80	.80	.80	.80	.80
23-23.9	.97	.97	.97	.97	.97	..	..	.97	.97	..	.95	.94	.95	..	.85	.85	.85	.85	.85
24-24.9	1.01	1.01	1.01	1.01	1.01	1.01	.94	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	1.05	1.05	1.05	1.05	1.05	1.05	.98	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.09	1.09	1.09	1.09	1.09	1.09	1.02	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.13	1.13	1.13	1.13	1.13	1.13	1.06	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.17	1.17	1.17	1.17	1.17	1.17	1.10	1.17	1.17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.21	1.21	1.21	..	1.21	1.21	1.14	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.25	1.25	1.25	..	1.25	1.25	1.18	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.30	1.30	1.30	..	..	1.30	1.23	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.9	1.35	1.35	1.35	..	..	1.35	1.28	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
33-33.9	..	..	..	..	..	1.41	1.34	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9	..	..	..	..	..	1.47	1.40	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9	..	..	..	..	..	1.53	1.46	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9	..	..	..	..	..	1.59	1.52	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9	..	..	..	..	..	1.65	1.58	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9	..	..	..	..	..	1.71	1.64	..	..	..	.	..	1.60	..	..	..	..	..	..
39-39.9	..	..	..	..	..	1.77	1.70	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40.9	..	..	..	..	..	1.83	1.76	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	..	1.89	1.82	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	..	1.95	1.88	..	..	..	..	..	..	..	..	..	..	..	..

KETTLEMAN HILLS—55 degree Gravity and above $1.65 per barrel.

LOW COST of OPERATION

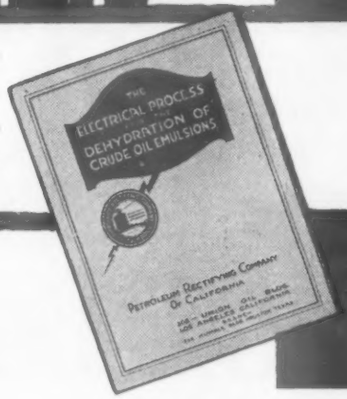
"PETRECO"



"Petreco" Electric Dehydrators are extremely economical in operation.

Electric power consumption ranges from 25 to 75 watt hours per barrel of cleaned oil. Electricity at a purchased rate of 1.5 cents per kilowatt hour recovers from 10 to 25 barrels of net cleaned oil for one cent.

The total cost of operation and upkeep, including interest, repairs and depreciation, ranges from one to three cents per barrel of net oil recovered, according to the character of the emulsion.



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Say you saw it in The OIL WEEKLY

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 52*)

(Magnolia Petroleum Company)
(Effective January 24, 1929)

Mitchell County	$ .65
Howard-Glasscock County (shallow)	.65
Howard-Glasscock County (deep)	.65

Col-Tex Refining Company

Howard and Mitchell Counties	$ .80

MARKHAM
The Texas Company
(Effective January 30, 1929)

All grades	.90

LULING

All grades	.80

NORTH AND CENTRAL TEXAS
(Effective January 24, 1929)
Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude
(Humble Oil and Refining Company)

Below 25	.60
25 to 25.9 gravity	.66
26 to 26.9 gravity	.72
27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 and above	1.44

SOUTH TEXAS

Mirando and Salt Flat	.80

GULF COAST
(Effective January 26, 1929)

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.05
25 to 25.9 gravity	1.07
26 to 26.9 gravity	1.09
27 to 27.9 gravity	1.11
28 to 28.9 gravity	1.13
29 to 29.9 gravity	1.15
30 to 30.9 gravity	1.17
31 to 31.9 gravity	1.19
32 to 32.9 gravity	1.21
33 to 33.9 gravity	1.23
34 to 34.9 gravity	1.25
35 to 35.9 gravity	1.27
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.33
39 to 39.9 gravity	1.35
40 an above	1.37

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9 Its price on all crudes above 35 to $1.37 per barrel.
Magnolia Petroleum Company's postings stop at 31 to 31.9.

SOMERSET
Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

WYOMING-MONTANA
(Effective January 25, 1929)
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.36
Grass Creek	1.36
Rock Creek	1.18
Lost Soldier	.95
Lance Creek	1.38
Mule Creek	1.10
Notches	.65
Big Muddy	1.28
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	$1.65
Cat Creek	1.33
Lake Basin	2.20

NEW MEXICO

Artesia	1.08
Hogback	1.38

CANADA
(Effective January 26, 1929)

Oil Springs	1.97
Petrolia	1.90

LOUISIANA-ARKANSAS
(Effective January 26, 1929)
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley*
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and

27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 gravity and above	1.44

*Shreveport-Eldorado's postings stop at above 40 gravity.
The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.
The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS
(All Companies)

Below 28 gravity	.70
28 to 28.9 gravity....N	.74
29 to 29.9 gravity	.78
30 to 30.9 gravity	.82
31 to 31.9 gravity	.86
32 gravity and above	.90

SMACKOVER
(All Companies)

Below 24 gravity	.75
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.85
Calion	.75

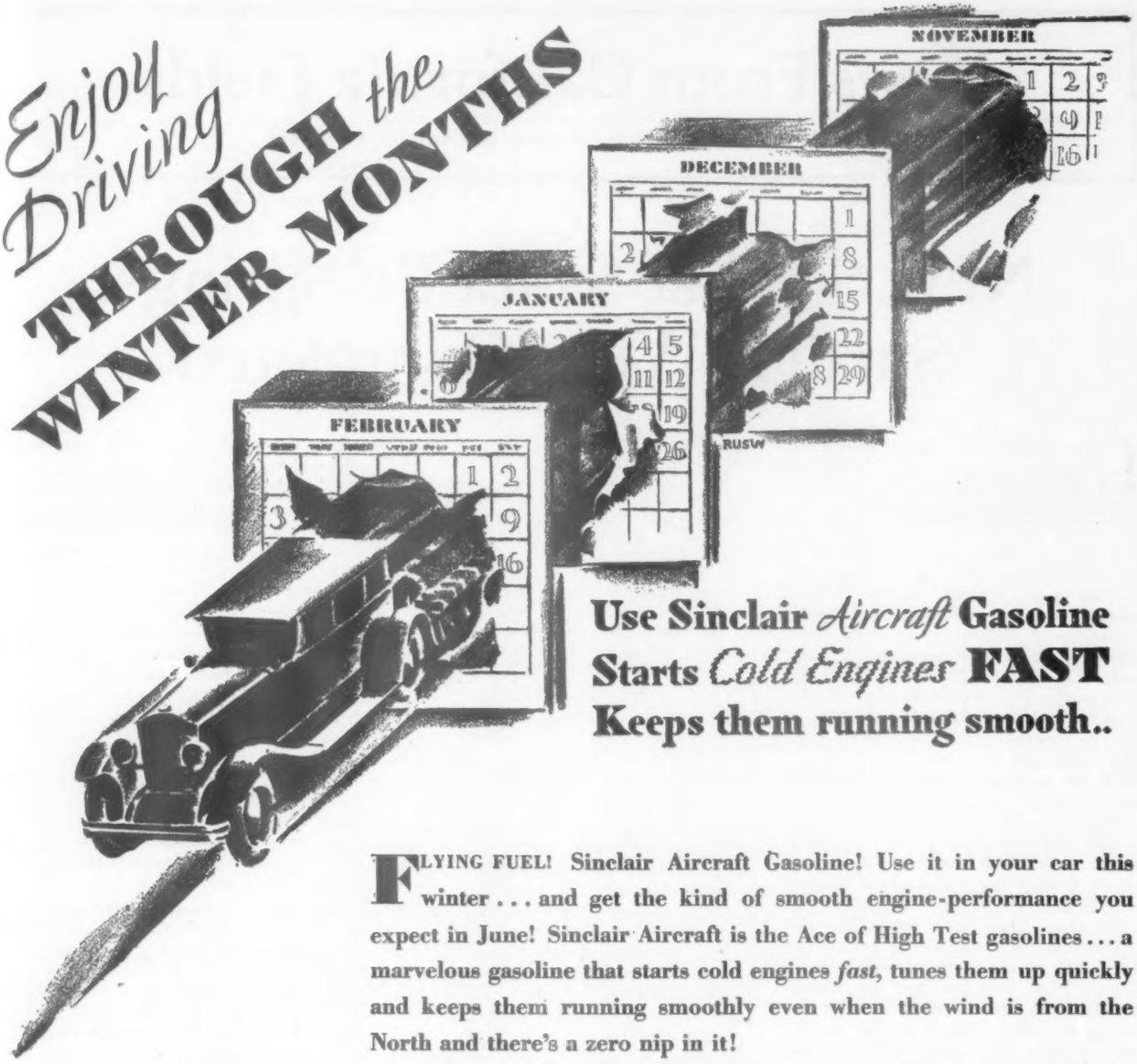
IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS
American Petroleum Institute Figures (Barrels of 42 Gallons)

	Week Ended Jan. 26	Week Ended Jan. 19
AT ATLANTIC COAST PORTS:		
Baltimore	115,000	143,000
Boston	.....	.....
New York	636,000	878,000
Philadelphia	428,000	200,000
Others	278,000	.....
Total	1,457,000	1,221,000
Daily Average	208,143	174,429
AT GULF PORTS:		
Galveston District	.....	.....
New Orleans and Baton Rouge	506,000	153,000
Port Arthur and Sabine District	.....	.....
Tampa	.....	40,000
Total	506,000	193,000
Daily Average	72,286	27,571
AT ALL UNITED STATES PORTS:		
Total	1,963,000	1,414,000
Daily Average	280,429	202,000
Daily Average Four Weeks Ended	264,357	246,857

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS
American Petroleum Institute Figures (Barrels of 42 Gallons)

	Week Ended Jan. 26	Week Ended Jan. 19
AT ATLANTIC PORTS:		
Baltimore	147,000	114,000
Boston	.....	.....
New York	75,000	155,000
Philadelphia	.....	149,000
Others	168,000	.....
Total	390,000	418,000
Daily Average	55,714	59,714
AT GULF PORTS:		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC AND GULF COAST PORTS:		
Total	390,000	418,000
Daily Average	55,714	59,714
Daily Average Four Weeks Ended	54,000	57,107
Distribution of Total California Oil Receipts is as follows:		
Crude	.....	.....
Gasoline	294,000	418,000
Gas Oil	.....	.....
Kerosene	96,000	.....
Total	390,000	418,000

Enjoy Driving THROUGH the WINTER MONTHS



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Say you saw it in The OIL WEEKLY

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

New Sand at Santa Fe Springs; Smaller Wells Completed

LOS ANGELES.—The discovery of another oil sand below 6400 feet in George F. Getty's No. 19 overshadowed other developments during the week at Santa Fe Springs and promises to place a new valuation on the entire area. After passing through a thick body of shale, 30 feet of good oil sand was cut, indicating that further drilling will disclose some very interesting facts. It is possible that another major producing formation has not been found, but the chances are better than even that an important new zone will be opened up. The shale ended just below 6400 feet, with the 30 feet of solid oil sand lying between 6415 and 6445 feet, the present bottom.

Nearly every major producing zone in the Los Angeles Basin has been found just below shale bodies, which act as a trap for the oil, and such a condition in the George F. Getty well means that either a new zone is at hand or the shale bed is breaking away from the usual position to sound a false alarm. Both the Buckbee and Intermediate zones in the field are just below substantial bodies, similar to the one found in the Getty well. When summed up in a few words, shale beds are always found just above the producing zones, but large producing zones are not always found below shale beds.

The opening up of a new sand in the Santa Fe Springs field would be of great importance from several angles, one being the relation of the zone to the upper Miocene, which is producing below 6000 feet in the Long Beach field. Some geologists believe that a zone around 6500 feet might prove the beginning of the Miocene, while others think it should be found much deeper. If it is productive here, it would give other Los Angeles Basin fields a chance for deeper production at depths above 7000 feet.

Outpost Wells Seek Still Deeper Sands

Operators who have missed both the Intermediate and Buckbee zones in outpost wells are hopeful that their losses may be retrieved through the development of still deeper sands. This seems an unlikely way of recovering losses, however, since the depth of the formation would make drilling very expensive, and the chances of encountering a deeper zone in wells which have missed the upper sands is remote.

Los. Angeles, Calif.—George F. Getty has 200 feet of oil sand in his No. 19 at Santa Fe Springs. Now drilling at 6510 feet. New sand looks like big producer.

Associated has found the new sand in Clark 2 in the extreme northern part of the field at 7320 feet and is still drilling in it at 7360 feet, indicating that the new sixth zone will be bigger than the Meyer zone.

George F. Getty's No. 19 is located only a short distance from the Wilshire Oil Company's discovery well in the Buckbee zone and should be a representative test. It cut all of the upper zones and could hardly be expected to miss one of the lower ones.

Operators are anxiously awaiting the outcome of the well, which is now drilling in oil sand at 6450 feet. The excitement caused by the discovery probably is much greater than warranted, but 30 feet of oil sand is very important at this point. It is because just such a shale body was expected at almost exactly the depth at which it was found that so much interest is attached to the discovery.

Slight Production Gain

Twelve wells with an initial production of 42,000 barrels were completed during the week, but production climbed only 10,000 barrels as the result. The decline of the 60 deep wells was about 400 barrels per well per week, and this, coupled with the outright loss of two good wells, practically offset the flush production.

Smaller wells are beginning to appear in the completion column and the average initial production of wells in the future is expected to be far below that of the past. It is chiefly for this reason that a decline is expected within a few weeks. Completions in the little-developed sectors compare favorably with those finished two months ago, the edge and offset wells showing the smallest initial production. As proof that the gas pressure drops rapidly in the vicinity of large wells, subsequent completions have shown much less life.

Production from the deep zone reached 165,000 barrels on February 2, but the average for the week was considerably lower. Average production of the 70 deep zone wells was about 2325 barrels, still a very creditable figure, when it is considered that many of the producers are two months old.

Associated Oil Company's best producer, Green 3, died after rapidly going to water. The well was completed a month ago and was flowing satisfactorily until bottom water broke in with a vengeance. Green 3 is located only a short distance from some of the field's best producers on one side, but only a short distance from some of the poorest on the other side.

The Shell Company continued its streak of hard luck on the Slusher lease by encountering bottom water in Nos. 14, 15 and B-1, with less than 50 feet of the Buckbee zone open. These wells are located in the southwest sector, which has made the poorest showing of any part of the field, and which has failed to produce as far out as in the Meyer zone. The company's Slusher 12 was the second completion in the Buckbee zone, and produced satisfactorily from only a few feet of sand. When deepened to include the greater part of the zone, bottom water killed the well.

As promising as the east side of the field has appeared, the extreme southeastern sector will not be productive in the Buckbee zone, where it yielded good wells in the Meyer zone. The Plymouth Petroleum Company's Roberts 1 has completely missed the Buckbee zone and is coring ahead at 6200 feet. The Buckbee shale was found, definitely eliminating the well as a producer in the objective sand.

The number of idle wells in the west side has increased to 24, with seven wells showing no tendency to flow when swabbed. The Buckbee zone appears to extend a much smaller distance from the center of the field in this direction than toward the east or north.

General Petroleum Corporation's

PERFECTION *Core Barrel*

1

The Split Liner allows you to remove the core in *two minutes* —clean and unbroken. Unscrew the cutter head, take out the Split Liner ... and that's all.

2

Cutter Head is made of heat treated Chrome Nickel Steel, faced with Stellite. You can always depend on it to take the core you want. Ask about our convenient and economical cutter head exchange plan.

3

A Clean Core is always assured as water circulates through the barrel until it reaches bottom. Then a ball dropped through the drill stem cuts off the water from the barrel.

4

Major Companies . . . more than 50% of the largest oil companies of America have bought Perfection Core Barrels within a year. "Such popularity must be deserved."

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Jalk 111, a deep test of the questionable southwest sector, is coring at 6400 feet, with the formation running to gray sand.

Both the Associated Oil Company and the Richfield Oil Company are drilling deeper in their outpost tests in the extreme northwestern part of the field. The former's Clark 2 has passed 7300 feet, while the latter's Elliott 1 is coring below 7000 feet. The chances for production in either of these wells is admittedly slight. Both found the Buckbee shale and both cut the shale which lies just over the new zone opened up in George F. Getty's No. 19.

Associated Oil Company's Dallugge 7, the most northerly drilling well, failed on a production test, after showing for a small well in the Buckbee sand. Bottom water spoiled the well's chances, and incidentally considerably dampened the prospects of production near the edge at this point.

Peak production seems well at hand and should come around the middle of February. It promises to fall below 225,000 barrels, judging from the decline of the older wells and the possibility of a smaller initial production from future producers. It requires much new production to steadily shove production ahead.

Fifteen wells are ready for completion, 13 of these being in the Buckbee zone and two in the Intermediate zone. About 30 additional wells are cemented over the Buckbee sand and should be completed by February 15. It is chiefly for this reason that the peak is set for the middle of the month.

Active drilling wells total 185, with 20 active locations. Nearly all of the new locations are in the east end of the field.

While many of the operators are wasting their surplus gas, the Union Oil Company is using its surplus from the Buckbee and Intermediate zones for re-pressuring the Meyer zone above. This is a somewhat tedious and troublesome task, but undoubtedly will pay in the long run.

Outlaw Oil at Fruitvale Makes Market Problem

Bakersfield, Calif.—The Fruitvale field appears handicapped, in that it yields oil which is too light to be classed as a heavy product and too heavy to fall easily into the high gravity class. While the recent reductions did not seriously affect the crude produced in the field, they were sufficient to retard drilling operations and postpone several locations.

The Mohawk Oil Company broke into the producing column with the completion of No. 2, Section 27-29-27. The well came in flowing 250 barrels of 23 gravity oil from above a plug set at 3625 feet. The completion did not extend the field.

Pacific Eastern Production Company, discoverer of the fiield, has suspended operations in two of its drilling wells, following the completion of eight producing wells, but has located another as a test of the K. C. L. lease.

Kettleman Hills Drilling Wells Increased

Coalinga, Calif.—Four new wells got under way in the Kettleman Hills field during the past week, bringing the number of active drilling wells up to eight. The wells actually started were Standard Oil Company's No. 8, Section 1-22-17, Milham Exploration Company's Beal 1, Section 34-21-17, General Petroleum Corporation's Armstrong 1, Section 4-22-17 and George F. Getty's Armstrong 1, Section 4-22-17. Standard Oil Company is going down rapidly in No. 81, Section 11-22-17, having passed 2300 feet in a very short time. This company has two additional locations, No. 58 on Section 17-22-18 and No. 87 on Sections 27-22-18. Marland Oil Company will start two wells as soon as rigs are completed and equipment assembled.

In anticipation of a long period of time in the drilling of each well, the operating companies are making everything thoroughly ready before starting these tests. The actual drilling time on the discovery well was nearly a year, with a much greater elapsed time. The formations encountered below 5000 feet are very hard, it being possible to make only a foot or two per day through certain strata. The number of drilling wells will show a steady increase, with a total of 30 expected by the middle of the year. Much has been learned from previous drilling, however, and it may be possible to complete wells in six months. Unusually heavy equipment is being used and the field is expected to cause the development of special equipment for the district.

Mt. Poso Area

Bakersfield, Calif.—With Mt. Poso as the northern hub, exploration of a wide territory will continue during 1929, with a view of opening up other small fields along the upthrow of a huge fault running along the east side of the San Joaquin Valley. Three small fields were found last year, all of which were distinct but small structures. About a dozen wildcats are drilling in the district, including those in the vicinity of the Kern River field. Some of these wells are being drilled on the theory that further extensions of the Mt. Poso field are possible. The field was extended more than a mile south, but similar discoveries north and east are lacking.

Interest in Rincon Field Continues to Lag

Ventura, Calif.—Richfield Oil Company has suspended operations in Miley-Hobson 1, in the Rincon field, and is concentrating on Hobson-Fee 1 in an effort to develop a commercial zone below 6500 feet. The company is drilling ahead in the latter at 6750 feet, with the formation running to a questionable gray sand. Miley-Hobson 1 was given a final trial on the compressor but produced only a few barrels. The well flowed oil and water but failed to produce after the bulk of the water was shut off. Hobson-Fee 1 has replaced Miley-Hobson 1 as a test of still deeper levels and upon its success or failure depends the development of a deep sand which would supposedly correspond to the Lloyd zone in the Ventura field. It has not been possible to correlate the formations in the Rincon field with those in the Ventura field, although they are only a few miles apart. The limited amount of drilling below 5000 feet in the former has proved inadequate for comparative purposes.

Interest in the development of the 3000-4000-foot zone has dropped to a very low point and production is showing a gradual drop. The field total reached 5000 barrels daily several months ago, but has fallen to 3500 barrels from 26 wells.

Ventura Production Rises Despite Curtailment

Ventura, Calif.—The M. K. and T. Oil Company has two wells nearing completion in the southern extension of the Ventura field and two which should be finished within two months. All of these tests were drilled on the strength of the original extension well which opened up a large acreage. Foster 2 has already reached the point at which Foster 1 was completed as a 1200-barrel well, but being located lower on the structure it will not be completed above 6000 feet. The other drilling wells are also located apparently less favorably than the original completion in the extension and probably will be completed at much greater depths.

Production has gradually increased for several months, despite the partial continuation of the conservation program. Some of the line wells are being produced at capacity, while nearly all inside wells are flowing at about 80 per cent. of maximum.

Midway Shallow Oil Sand Area to be Tested

Taft, Calif.—Considerable importance has been attached to the discovery of a shallow oil sand in Thomas H. Purman's wildcat test on Section 12-32-22, just west of the producing limits of the Midway field and more than a mile west of the Republic Petroleum Company's original completion in the deep sand on Section 8-32-23. The oil sand was picked up around 950 feet and continued to 990 feet. The well will be tested at this depth. The completion of a large well in the present formation is not expected, but commercial production at this level indicates a deeper sand, judging solely from developments in wells within the producing limits of the field.

Republic Petroleum Company will plug back from 4435 feet to 2475 feet in No. 32, Section 8-32-23, which was a virtual failure below the level which produced satisfactorily in other wells.

Union Oil Company is coring below 3000 feet in W. P. 1, Section 27-32-23, having missed the expected sand around 2600 feet. This well was deepened on the theory that the sand found productive to the northwest would be found above 3000 feet.

Oklahoma--Kansas Field Notes

WARREN BAKER, *Staff Representative, Tulsa, Oklahoma*

Water in Number of Tests Show Maud Production Spotted

TULSA.—Indications now are that the potential production of the western Maud district in the Misener-Hunton may not be as great as originally anticipated, since the district's producing structure now appears to be spotted. Operations in the field during the past week resulted in the finding of water in several tests, and a west extension producer.

The majority of the wells encountering water were in the area, heretofore, considered certain to produce, since producing wells had practically proven the locations productive. The Texas Company's Calvin 3, NW NE SE Section 7-8-5, diagonal southwest offset to Gypsy Oil Company's Bourassa 1, discovery well, found the Misener sand from 4124-4129 feet, and Hunton lime from 4129-60 feet. This well is making 350 barrels of oil daily, cutting two per cent. The same company's Calvin 4, west offset to No. 3, has 2000 feet of fluid in the hole, mostly water, from the Hunton lime at 4083-86 feet. These wells apparently indicate that the south and north producing structures in west Maud will be separated by a row of small wells and failures.

Amerada Petroleum Corporation's Gosland 2, SE NE SW Section 8-8-5, has 1200 feet of oil in the hole and is showing a little water from the Hunton lime at 4085-4139 feet. This test is south one location from the Gosland 1, which it will be remembered is a small well in the Misener and Hunton. It is producing from this formation through a bradenhead and is making some oil from the Simpson sand after plugging back from the Wilcox.

T. B. Slick-White Eagle Oil & Refining Company's Villines 1, NWc SE Section 20-8-5, southeast of production in western Maud, swabbed 30 barrels of oil and some water from the Simpson sand topped at 4130 feet. The Wilcox sand was found from 4515-22 feet and a hole full of water resulted. Gypsy Oil Company's Bourassa 3, SWc SE NE Section 7-8-5, made 48 barrels of water and no oil from 4047-52 feet in the Misener sand. Shell Petroleum Company's Wiley 1, SWc NW NW Section 8-8-5, failed to show production after being plugged back to the Hunton lime and shot with 40 quarts from 4025-35 feet. It is in the north part of the field.

Indian Territory Illuminating Oil Company's Tully 1, SEc SW NE Section 10-8-5, eastern Maud, swabbed 156 barrels of water and 102 barrels of oil from the Wilcox sand at 4256-59 feet. It refilled 1600 feet with water and a little oil in two hours. Barnsdall Corporation's Fife 2, SW NE NW Section 14-8-5, southwest of the Company's discovery Wilcox sand well, has a hole full of water in the second Wilcox sand from 4413-19 feet and is being plugged.

Amerada Petroleum Corporation extended the producing area of western Maud one-quarter of a mile west with its Hallum 3, SW SE SE Section 1-8-4. This well topped the Misener sand at 4099 feet and the Hunton lime at 4108 feet. It has a total depth of 4115 feet and is flowing 40 barrels per hour.

An interesting test in the Maud district is the Sunray Oil Company's Stone 1, SWc SE SW Section 19-8-5, south of production in the south extension to western Maud. This test is drilling at 4240 feet in the Sylvan shale. It will be the second test of the Wilcox sand in this particular area. The well is considered to be running favorable for production.

Second Well Boosts Stock Of Marion County

Tulsa.—The second well to penetrate the new deep pay in the Davis pool of Marion County, Kansas, was the Shell Petroleum Corporation's Funk 1, NW SW Section 7-19-3e. It is a southeast diagonal offset to the Empire Oil & Refining Company's discovery deep pay well. The Shell test swabbed 725 barrels in 24 hours after being deepened to 2810 feet in the sand found at 2804 feet. This well places a much higher aspect to the new field since it is a better well than the discovery producer.

The discovery producer, Empire Oil & Gas Company's Suderman 1, SE NE Section 12-19-2e, was drilled to 2849 feet where it encountered some water and has been plugged back to 2845 feet. It is doing 225 barrels per day.

The oil play in McPherson County received renewed interest during the past week with the completion of Gardner Petroleum Company's Benson 2, NE SW Section 32-18-2w. It flowed over the top of the derrick from 2950 to 2986 feet. It is doing two and a half million gas and spraying some oil and water. This is the third oiler in the county.

Kansas operations continue to be greatly hampered by cold freezing weather. There was nothing new in the Wichita or Valley Center field.

Marland Production Company's Vine 1, SW SW SE Section 37-11-19w, Ellis County, western Kansas, was abandoned after failure to find oil at 3825 feet.

Mission Closely Watched

The Mission field, with more than 40 wells shut down on the pay sand, continues to be closely watched. The big question of operators at present is whether an agreement will be reached when they meet to prolong the drilling in of these wells and the starting of new ones, or whether the exploration of the area will be at once. Today, the prospects of any big recovery continues to look small, due to the finding of water in several of the tests now shut down on top of the sand.

Champlin Refining Company's McCiesey, SE SW Section 5-7-6, west of the Little River field has found a hole full of water in the Wilcox sand from 4960-4962 feet and is being abandoned. Atlantic Oil Producing Company and Gypsy Oil Company's Delaware 1, SE NE NE Section 13-9-4, west of the Earlsboro field, has a hole full of water in the Wilcox sand at 4465 feet. It will be plugged back to the Hunton and that formation tested.

Production of Greater Seminole showed a small increase during the past week and is now 298,436 barrels daily according to the gauge for the 24 hours ending 7 a. m. Monday. Production was divided as follows:

Little River, 323 wells, 103,638 barrels;

Maud, 50 wells, 35,490 barrels;

Mission, 16 wells, 710 barrels;

Bowlegs, 312 wells 41,808 barrels;

Earlsboro, 295 wells, 62,367 barrels;

Seminole City, 280 wells, 40,122 barrels;

Searight, 69 wells, 9,301 barrels.

When St. Louis' production of about 130,000 barrels daily is added to this (since it is in the Seminole district)

the grand total is raised to better than 428,000 barrels per day.

T. B. Slick's et al Davis 2, SWc NW NE Section 18-7-5, north extension discovery well to the St. Louis field, has been placed on air pressure. The well did 4800 barrels in 24 hours, cutting 25 per cent. Gypsy Oil Company's Winn 1, NEc SE NW Section 9-7-5, northeast two miles from the Slick extension, has 1500 feet of water in the hole from 4445-48 feet.

The most interesting test in the Allen field at present is the Sinclair Oil & Gas Company's Jefferson 1, SEc NE SE Section 23-5n-7e. This well has finished setting the pipe and is drilling ahead at 4075 feet. It has made a correction on the top of the Viola lime, which is now being called at 4019 feet. This raised it considerably more in comparison with the dry test of T. B. Slick offsetting it to the southeast, and is now correlated as being better than 150 feet higher than the Slick. Sinclair Oil & Gas Company's test will be the second to penetrate the Wilcox sand in southwestern Allen.

Superior Oil Corporation's wildcat in Section 24-8-2e, near Macomb, in Pottawatomie County, has topped the Viola lime at 5305 feet. A four-inch liner has been set at 5320 feet to prevent any caving in the Sylvan shale.

Lew Wentz et al's test in Section 6-15-12e, near Beggs, which created much interest in that area as a result of doing 100 barrels per hour, flowing wild, is now running the six-inch casing on top of the Misener sand at 2460 feet to prevent further caving. The well is not flowing at present due to cavings. It made 210 barrels in one hour on its last gauge.

Shell Has Late Model Plane

HOUSTON.—A party of Shell Petroleum Corporation officials last week initiated the "Golden Shell," new $70,000 Fokker super-trimotor monoplane recently christened flagship of the Shell Aviation Corporation, by touring properties of Shell Petroleum Corporation through the Southwest at 125 miles per hour.

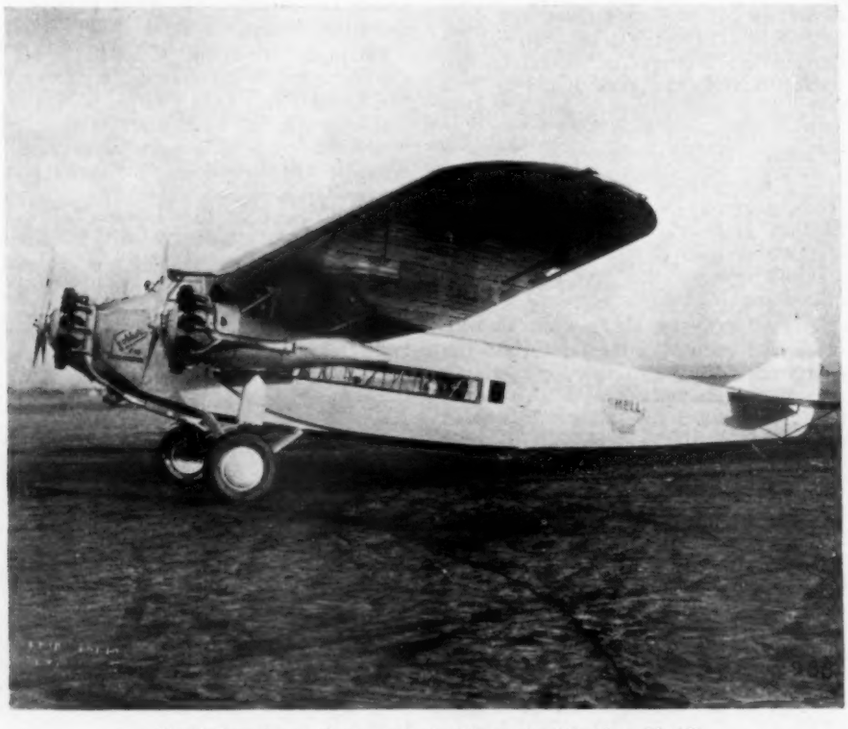
The party included President U. de B. Daly and G. S. Rollin, vice-president in charge of production, who met the craft at Houston following its arrival from St. Louis and Tulsa, Tuesday, January 29, Dr. W. Van Holst Pellekaan, vice-president, Shell Petroleum Corporation, F. A. Jones, secretary, Shell Aviation Corporation, Milton Girton, widely known aviator and the ship's regular pilot.

Following a short business conference at Shell Petroleum Corporation's Southwest headquarters in Houston, the party took off January 31 for Carlsbad, New Mexico, via West Texas fields. Return was made by San Angelo, February 3, and into Houston. On the following day the "Golden Shell," carrying several of the party, proceeded to Ardmore, and reached its home port, Lambert, St. Louis field, at Anglum, Missouri, the same day.

The new craft, which will be used primarily for official field tours, is described by aviation experts to be the last word in commercial aircraft, and equipped to meet the most rigid requirements of modern transportation. It has three Wasp motors of 400 horsepower each, a wing spread of 71 feet, six inches, is 12 feet, eight inches high, has a top speed of 150 miles an hour and cruises at 125 miles per hour.

Special attention was given in purchasing this plane to the comforts provided. The cabin is 16 feet long and five feet high, carries six roomy arm chairs, a comfortable lounge, a table, running water, a lavatory and a refrigerator. A roomy compartment for baggage is provided behind the cabin.

The "Golden Shell" adds another step to the rapid move now evident in the oil industry to avail operators of rapid transportation where business of outstanding importance is involved.



Shell Petroleum Corporation's Plane the "Golden Shell"

Glasscock-Settles Crudes Have One Posted Price

Big Spring, Texas.—A price differential of 15 cents per barrel heretofore enjoyed by production from the 2200-foot horizon in the Settles pool section of the Howard-Glasscock County field over other oil obtained from the deep pay levels, has been discontinued by all independent crude purchasers. The three major pipe lines connected with the field have never recognized the higher price scale in the Settles pool, and have stuck to a flat price of 65 cents per barrel for all deep production, while Magnolia Petroleum Company posted a price of 80 cents per barrel for the shallow oil, but reduced the latter to 65 cents January 26. The Coltex Refining Company, which operates a refinery at Colorado, with direct line connections, is continuing to pay 80 cents per barrel for the shallow oil in Howard-Glasscock County district, but may follow Magnolia Petroleum Company.

Group One Oil Corporation (Texon Oil & Land Company) and Marland Production Company, which control the bulk of the acreage proven for production on the Settles ranch in the 2200-foot pay and operating same on a 50-50 basis, have closed contract to sell their oil for a 12 months period to the Louisana Oil Refining Corporation at the official posted price at the well. This contract calls for a maximum daily delivery of 10,000 barrels after the third month of its duration, and if the sellers are unable to supply the contract amount they will be permitted to apply their production in the Roberts original deep pay area, or that produced from the Settles shallow horizon.

Deliveries to Louisiana Oil Refining Corporation have been made from the Settles area by Group One and Marland since 7 a. m. January 16, 1929, such being the official starting date of the one-year contract, and during the first month maximum deliveries are to be 3,500 barrels daily; 5,000 barrels daily during the second 30-day period; 7,500 barrels daily during the following 30-day period ending 7 a. m., April 16; and 10,000 barrels daily for the remaining nine months, if the oil is available. Over and short deliveries are to be accumulative.

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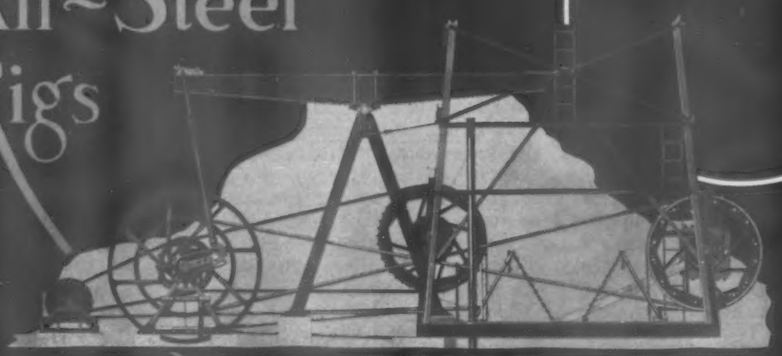

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North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Ten Wells in Daugherty Pool; All Make Some Water

SAN ANGELO, Texas.—Two flowing wells added to the Daugherty pool in northern Winkler County within the past week increased the number of producers to 10, with four other tests in process of completion as offsets to the above producers.

This area has been a disappointment so far, owing to most of the completions making a high percentage of water when given initial tests, but exploration work has been confined to within a half mile of the discovery well. The trend of production remains to be determined, with a dry hole one-quarter of a mile southwest of the discovery producer, and a second failure two and one-half miles to the northeast.

The Warner-Quinlan Company of Texas' Leck-Daugherty 1 was credited with making more than 50 million cubic feet of gas and about 500 barrels of clean oil daily from regular pay at a total depth of 3105 feet. This producer gives the pool three wells in a row along the north line, while Prairie Oil & Gas Company's Daugherty 1 widened the field one location to the south and out of Section 3, which has furnished all the producers to date, with an initial flow of 500 barrels of clean oil and about six million cubic feet of gas after drilling four feet in the lime pay to a total depth of 3140 feet. Humble Pipe Line Company is running all the oil produced in this pool, with an eight-inch line, but Magnolia Pipe Line Company will probably extend its recently completed line into the Llano pool over to the Daugherty farm to take Warner-Quinlan Company's oil for common carrier movement to the Gulf Coast.

In the Settles pool, Howard County, the Plymouth Oil Company's Kloh 1, which recently widened the lime pay more than one mile to the southwest, swabbed at rate of 50 barrels of 33 gravity oil per hour for nearly five hours from pay after drilling 33 feet of pay to a total depth of 2297 feet. The well is credited with having swabbed dry after this test, but has not been shot. It is to be on the pump.

Howard County Oil Corporation's Kloh 1, located more than a half mile northwest of the above producer, was credited with having cored an oil saturated lime at 2231 feet after logging the top of the lime at 2185 feet, with favorable prospects of making a producer. Plymouth Oil Company will have two offsets to drill.

Simms Oil Company has purchased the Red Bank Oil Company's 140-acre lease on the Smith land, located on the southwest side of the field, with five completed wells, for a consideration of slightly more than $300,000. The deal was closed February 2, but oil runs from the lease go to Simms Oil Company from January 12. Simms Oil Company is one of the pioneer producers in the Yates field with lease covering Section 103, which is earning the owner fourth position among producing companies in the field. The Texas Company has been negotiating for the purchase of a one-half interest in these properties from Simms Oil Company.

Allowable production in the Yates field was advanced to 87,500 barrels daily effective February 1, representing 15,000 barrels of the increased quota authorized for the field by the Texas Railroad Commission after a special hearing held January 12, and when facilities are made available the output is to be automatically raised to 100,000 barrels daily. According to proration figures released at the close of January by Umpire Ray Richmond, the field is credited with having an estimated daily potential of 4,560,618 barrels from 291 producers on 162.9 units, and based on an 87,500 barrel daily outlet during the first one-half of February the operators will be allowed to produce .019 per cent. of the field's potential. Only three old wells were regauged for the above figures, while four new wells were added. The joint properties of Mid-Kansas Oil & Gas Company and Transcontinental Oil Company registered slightly more than one-half of the potential, having been credited with 2,342,945 barrels.

Potential production estimates in the Winkler County fields is showing a slump, and at the close of January the county's potential output was placed at 2,607,183 barrels daily from 507 wells located on 222 40-acre units. The allowable daily production is 175,000 barrels, or .067 per cent. of the estimated potential production. The deep pay area in the Howard-Glasscock County field, which is the other West Texas area on proration, is allowed to pump about 60 per cent. of the potential production, with no flowing wells in the field.

Gulf Extends West Texas Trunk Line 80 Miles to Hendrick

MIDLAND, Texas.—Extension of the Gulf Pipe Line Company's system from its West Texas terminal at Midland to the Hendrick field, Winkler County, Texas, is to be made immediately with an 80-mile combination eight and ten-inch line, while the increased volume of oil to be supplied by this new unit will necessitate the erection of two or more additional main line stations along the 211-mile stretch of 10-inch pipe between Midland and Ranger. In recent months Gulf Production Company has been selling 10,000 barrels daily to Humble Oil & Refining Company and the balance of its Hendrick field production to Shell Pipe Line Company, but Humble is reported to have requested relief from this connection under terms of contract, which calls for 60 days advance notice of cancellation, thus making it necessary that Gulf Pipe Line Company start running the oil late in March.

Materials are now enroute to build the extension and about 60 miles of 10-inch pipe will be required to build from the Midland tank farm in the south half Section 41, Block 38, T. & P. Survey, T-1-S, Midland County, where six 80's and four 55's are located. The ten-inch pipe will be used as far as Monahans, Ward County, with about 20 miles of eight-inch pipe from this point to Gulf Production Company's principal Hendrick field tank farm in the Section 32, Block B-5, where 21 80,000 barrel steel tanks are located. Gulf Pipe Line Company also has 20 80's in the heart of the field in the Section 34, Block B-5, thus giving total storage of 3,280,000 barrels, with about three-quarters of a million barrels available room.

Recent developments along the north line and in the southeastern part of Ward County has put this county in the potential production class, and with this in view the Gulf Pipe Line Company's extension is being routed via Monahans, rather than to take a direct course from Midland to the Hendrick field and parallel with Atlantic Pipe Line Company's 10-inch system.

Gulf Production Company is the second largest oil producer in Winkler County, having earned a maximum daily production of 16,659 barrels under proration during the first half of February from 32 wells on 14 40-acre units, with an estimated daily potential flow

of 332,038 barrels, according to official proration figures.

A portion of the 10,000 barrels of daily production contracted by Humble Oil & Refining Company to purchase from Gulf Production Company in the Hendrick field has been applied along with a quota furnished by Southern Crude Oil Purchasing Company and Humble Oil & Refining Company in fulfilling crude contracts held with Pyote skimming plants by the Texon Oil & Land Company, which has been unable to meet its contract obligations because of the enforcement of proration in the field. However, this oil nets the producer 65 cents per barrel, or the regular posted price, and Texon receives 10 cents per barrel for transporting same to Pyote.

Gulf Pipe Line Company's Midland-Ranger trunk line has been handling a maximum of 26,000 barrels daily, with only one intermediate station, which is located near Roscoe, Nolan County. Forty-acre station sites have been bought in the Section 7, Block 30, T. & P. survey, T-1-S, Howard County, and in Section 33, T. & P. survey, Callahan County, or about four miles west of Clyde.

W. F. Rollins is superintendent for the Gulf Pipe Line Company in the North, Central and West Texas district, with headquarters at Fort Worth, and will have charge of the construction work. Joe Pyron is foreman of the West Texas district, with headquarters at the Gulf-McElroy camp, Crane, Texas.

Salt Flat Production to Move to Galveston

Luling, Texas.—The Petroleum Pipe Line Company of Texas has arranged for the immediate construction of a new 10-car capacity rack on the Southern Pacific Railroad to market the production of Cranfill & Reynolds, Inc., which is a major stock owner in the above concern, and to purchase oil from other producers in the Salt Flat field, Caldwell County. This move was decided upon after all buyers in the field reduced their posted price to 80 cents per barrel at the well. A new rack has been shipped by the Patterson Steel Company, Tulsa, and pipe is being strung to lay a four-inch gathering line over the field.

T. J. Mullin, formerly president of the American Petroleum Company, Houston, is president and active manager of the Petroleum Pipe Line Company of Texas, with headquarters at 1111 Magnolia Building, Dallas, Texas. Crude run from the Salt Flat field will be moved via Southern Pacific Railroad to Texas City, or Galveston, with a freight tariff of 11 cents per 100 pounds applying, and stored until sufficient volume is accumulated to make full tanker shipments. The rack and line are scheduled to be in operation about the middle of February.

Salt Flat crude ranges from 35 to 37 gravity, and the principal purchasers in the field are Sun Oil Company and Magnolia Petroleum Company. Tank car racks are operated by Sun Oil Company, Gulf Production Company and Shell Petroleum Corporation, while Magnolia Petroleum Company's purchases are handled direct by the Magnolia Pipe Line Company's system. Humble Oil & Refining Company is now moving approximately 900 barrels of its own production from 12 wells by tank car along with crude obtained from outside connections. Should steady production at Salt Flat develop to the point of warranting a pipe line outlet, Humble Pipe Line Company has available two probable connections within a reasonable proximity to the field.

Gulf Building Refinery At Sweetwater

Sweetwater, Texas. — Gulf Refining Company is preparing to begin construction of its refinery of 5000 barrels crude capacity which will be located a few miles west of Sweetwater, and which is expected to be in operation in less than 10 months.

Cracking capacity of the plant will be approximately 4000 barrels, and West Texas crude will be utilized in turning out gasoline and fuel oil. Its gasoline product will serve to give the company local distribution with little transportation envolved to points in this territory.

Aside from being located in close proximity to Gulf Pipe Line Company's West Texas-Port Arthur main line, the refinery will be located near the junction of three railroads, the Texas & Pacific, the Santa Fe and the Orient, all of which serve Sweetwater. Production in Howard, Jones, Mitchell, Scurry, Fisher and Runnels Counties will find a fairly central point in the new refinery.

Completion of the 5000-barrel unit at Sweetwater will raise the total daily capacity of Gulf Production Company in its five refineries to roundly 200,000 barrels, with a cracking capacity of approximately 60,000 barrels daily.

Gonzales County Crude Gets Market Outlet

Luling, Texas.—An immediate market outlet for the Empire Gas & Fuel Company's wildcat oil producer on the Mrs. R. M. Norwood farm, Ottin pool, Gonzales County, is to be afforded by the Central Texas Refining Company, which will lay a four-inch line from the well to a small car rack on the Southern Pacific Railroad. The oil will be shipped via tank cars to the purchaser's skimming plant at Minerva, Texas. The discovery well is reported to be pumping 250 barrels of 32 gravity oil daily from pay at 3754-85 feet, and an offset by Cranfill & Reynolds, Inc., is scheduled to reach the pay horizon this week. The Central Texas Refining Company, with C. A. Middleton, president, maintains headquarters at Corsicana, and recently succeeded the Kent-Middleton Refining Company through the purchase of stock held by Garland C. Kent, Corsicana.

Cedar Creek Producers Seek Market

Luling, Texas.—Operators in the Yost pool, located near Cedar Creek, Bastrop County, Texas, are negotiating for a new market outlet for their future production since Magnolia Petroleum Company has declined to take on new connections for the purchase of oil, while in the meantime a few of the recent completions in the shallow serpentine formation have been shut in. All producers in the pool, which is making about 2500 barrels daily from nine wells, are dependent upon the eight-mile four-inch line built to the area by Magnolia Pipe Line Company shortly after the discovery well was completed last November by A. M. Loomis and Cranfill & Reynolds, Inc.

Oil produced in the Yost pool ranges from 25 to 27 gravity, and most of the producers are making cut oil that has to be conditioned before being accepted by the pipe line. Magnolia Petroleum Company has announced that it is producing and buying more of this grade of oil in the Luling district than can be marketed at the 80 cent posted price, but will run the oil for producers on a common carrier basis. Atlantic Oil Producing Company, which is one of the leading producers in the pool, is having its oil thus delivered to the coast.

Recent completions at Cedar Creek include Atlantic Oil Producing Company's Yost 3, which came in for 300 barrels, and the same company's Yost 2, initial production of which was 2000 barrels.

Texas Extending Pipe Line to New Mexico

San Angelo, Texas.—The Texas Pipe Line Company is making preliminary arrangements to build an extension from its pipe line system in the Hendrick field, Winkler County, across the state line into southeastern New Mexico to provide a market outlet for two small flowing oil wells owned jointly by The Texas Company, Amerada Petroleum Corporation and Columbian Carbon Corporation on government leases. About 25 miles of six-inch line will be required.

San Angelo, Texas.—The San Angelo Refining Company has contracted to purchase a maximum of 600 barrels of crude daily from the Pecos Valley Oil Company, which has a wildcat flowing well making about 100 barrels of 36 gravity oil daily from pay at 1626-28 feet in Northern Pecos County. Announcement of the construction of a small pipe line from the well to a six-car capacity rack on the Orient Railroad near Grant was made last week, and a comparatively cheap freight rate will apply in delivering the crude to the purchaser's skimming plant at San Angelo. More than a half-dozen additional tests are being started near the above wildcat oil producer.

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

Deep Production on Two Sides Gives Barbers Hill More Promise

HOUSTON.—Barbers Hill, Chambers County, which has been known in the past principally for the large number of dry holes drilled there, now has the most promising outlook of the entire quarter-century of its history; Yount-Lee Oil Company having just discovered a prolific deep sand on the south flank of the dome; and this discovery having been preceded only a short time ago by the finding of a rich mile-deep oil sand on the northeast flank of the dome by the Mills Bennett Production Company—in which a second large well was recently completed by the Humphreys Corporation.

With the new Yount-Lee Oil Company well and the Humphreys Corporation deep well furnishing the bulk of it, the field's production during a 24-hour period early this week was 6866 barrels. Prior to the discovery of the deep sands, the production was around 600 barrels per day.

Yount-Lee Oil Company's new producer is Chambers County Agriculture Association 1. It came in January 29, flowing 2000 barrels daily through a one-half-inch choke; and on the next day, reduced to three-eighths-inch, it was making 1200 barrels. Production is from 12 feet of sand at a total depth of 5315 feet; and casing is set at 5065 feet. The oil from the well is approximately 30 degrees gravity, corrected.

Last Saturday, four days after completion, the well was making around 4000 barrels flowing through a one-half and a three-eighths-inch choke; and on Monday of this week the production had increased to 4700 barrels daily, still on the one-half and three-eighths-inch chokes.

Production of the Barbers Hill field is being handled by the Liberty Pipe Line Company, a Mills Bennett interest. That company has a pipe line leading out of the field to Cedar Bayou; and the oil is shipped from that point by barge to Baytown, where it is delivered to the Humble Oil & Refining Company's refinery.

New Shallow Wells

Although the new Yount-Lee Oil Company well is producing from a sand which has not previously been tapped, its location is in the immediate vicinity of several wells which are pumping from shallower depths. The lease on which it is located comprises approximately 175 acres. On this same lease, and within a few hundred feet of the big well, several tests have been abandoned in the past around 4000 feet or lesser depths. Just north of the new well, Mills Bennett in 1921 abandoned a test in salt at 2688 feet; and slightly south of the producer, Mills Bennett abandoned a test at 4147 feet. At that time it was not practical to drill much deeper than 4000 feet, considering the equipment and machinery then available.

Through the large amount of drilling that has been done there, the Barbers Hill dome is well outlined; and it appears that the Yount-Lee Oil Company's lease on which the new well is located embodies a large strip of probably productive acreage; with the Sun Oil Company holding a 50-acre lease jutting up into the Yount-Lee Oil Company lease much as the Texas Panhandle extends into the north part of Oklahoma. Gulf Production Company also holds large acreage which may be in the trend of production. Just east of the Yount-Lee Oil Company's discovery lease, Gulf Production Company owns in fee a large tract which it purchased from the Fisher family. The Fisher lands were originally leased to the United Petroleum Company, which in turn sub-leased most of it to major operators, including Empire Gas & Fuel Company, Sun Oil Company, Republic Production Company and Humble Oil & Refining Company. Some of these leases lapsed, however, and in the case of others, there is reported to be uncertainty as to the status of the old leases.

Yount-Lee Oil Company has made a location for Chambers County Agriculture Association 2, 150 feet west of No. 1, the foot measurements of the well being 50 feet from the west and 500 feet from the north line, William Bloodgood survey. It was rigging up the first part of this week. Offsetting No. 2 to the west, Gulf Production Company is now rigging up Fisher Fee 1; and the Sun Oil Company is rigging up No. 1 on its 50-acre lease out of the Chambers County Agriculture Association tract, the test being slightly west of the new Yount-Lee Oil Company producer.

This part of the field is directly across the dome from the northeast flank in which Mills Bennett and the Humphreys Corporation have tapped prolific deep pay; but the depth of production and the gravity of the oil is nearly the same on both sides of the dome. Whereas Yount-Lee Oil Company well is making 30 gravity oil from 5315 feet, Mills Bennett's Smith 1 came in making 4500 barrels of 26 gravity oil at 5272 feet, and the Humphreys Corporation's Kirby C-1 came in for 2000 barrels 27.5 gravity oil at 5231 feet. The Mills Bennett well on the Smith land has the distinction of being the first of the big producers from the deep sands, and was largely responsible for the revival of interest in Barbers Hill and the testing out of the deeper levels.

History of Development

The Barbers Hill dome is indicated on the surface by a mound-like elevation, and was first drilled on for oil soon after the old Spindle Top field came in. The first oil, however, was not found until 1916, a 40-barrel well being completed then jointly by Gulf Production Company and Humble Oil & Refining Company; and the first commercial production was obtained in 1918 by the United Petroleum Company. In addition to the northeast and the south flanks of the dome, which are now productive, the field has yielded some oil also from the northwest flank, where the wells were around 2200 feet. The producers in the south and southwest part of the field have been from 2700 to 4500 feet deep; the oil coming from the Miocene, as in the northwest part of the field. The new deep production, both in the northeast and the south parts of the field, is from the Oligocene.

In years gone by large sums have been expended at Barbers Hill without ever developing any production of consequence. Dry holes were finished on all sides repeatedly; with the result that around 80 per cent. of the tests have been failures. In the decade ending with 1927 the field produced only about 1,000,000 barrels of oil. The production in 1927 was 68,575 barrels. In 1928, however, boosted by the production from Mills Bennett's Smith 1, the field's total production was 322,950 barrels.

Various tests are now being put down in the field, on three sides of the dome. On the east side, in the vicinity of the Mills Bennett and Humphreys Corporation deep wells, Mills Bennett's Kirby 2, which failed to make a well in an oil bearing sand at 5312-5428 feet, is side-tracking at 5411 feet; Mills Bennett's Smith 2 is a derrick; Mills Bennett and Republic Production Company's J. C. Means 1 is drilling shale at 2827 feet; Humphreys Corporation's Barber 1 is drilling sandy lime and shale at 4843 feet and its Kirby B-6 is showing oil in a sand at 5571 feet; Mike Kouri's Shaw 1 is

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in hard sand at 800 feet; and Joe Bashara's Tarbutton 1 is drilling sandy shale at 4647 feet. On the southwest side of the field Yount-Lee Oil Company has made location for Richardson 3, having completed Richardson 2 as a 30-barrel pumper at 2080 feet.

Start Four New Tests in Washington County

Dallas, Texas.—Locations for the immediate drilling of four new tests in the shallow sand horizon in the Clay Creek field, Washington County, Texas, have been made by the Sun Oil Company, with operations under way on four other tests. Sun Oil Company has about 9500 acres under lease in an almost solid block surrounding its discovery well, and is marketing its own production via a small line extending to a tank car rack at Gay Hill. The official posted price is 85 cents per barrel at the well, while the oil tests 25-26 gravity.

Later production tests given Sun Oil Company's Mrs. H. Witt 1, which was reported early last week as a big well and a slight extension to the northwest for the field, credits the well with flowing 235 barrels of clean oil per hour for a three-hour period from sand at 1121-50 feet. Sun Oil Company's C. H. Marcus 1, located a short distance to the northeast of the above big well, encountered a gas blowout late last week at 681 feet, and Mrs. J. Grote 1, located further to the northeast and on a 39¾-acre lease, is showing for a 10 barrel pumper after plugging back from water formation at 1341 feet to test sand pay at 1233-89 feet.

Sun Oil Company is shipping 10 to 15 cars of crude daily from the field to its export terminals near Beaumont, but most of this oil is coming from the two wells on its Geo. F. Grote 75.22-acre discovery lease. Two more locations have been made along the northwest line of the latter tract, while other locations are in the northwest corner of the C. Eimann 90-acre lease, and on the Mrs. J. Grote lease. Eimann 1 failed to make a producer when drilled to 2598 feet, and has been plugged back to the 1300-foot level for a more thorough testing, while L. Marcus 1, located southwest of production, also missed the shallow pay, and is drilling at 3585 feet.

Coastal Depth Record Set At Goose Creek

Houston. — Humble Oil & Refining Company has established a new record for the Gulf Coast in deep drilling, having carried its Simms-Smith 74 at Goose Creek down to 6967 feet, where it was abandoned in stick shale.

Prior to the drilling of this well, the Gulf Coast record was held by Yount-Lee Oil Company's Gladys 6 at Spindle Top, which went to 6765 feet and was abandoned.

In addition to its present record of the deepest test in the Gulf Coast, the Goose Creek field also has the distinction of having produced oil from the greatest depth in the Gulf Coast. That oil was from the Humble Oil & Refining Company's Simms-Smith 73, which was drilled in 1928. About May 15, 1928, it came in at 6159 feet making considerable gas and oil at the rate of about 700 barrels per day, with the drill stem in the hole. It was never completed as a producer, however, and was finally abandoned at 6245 feet. The deepest completed producer in the Gulf Coast was Pure Oil Company's Sweet Lake 4 at Sweet Lake, Louisiana, total depth 5924 feet. That Sweet Lake well is still producing, about a year after completion, now making 200 barrels a day, on air.

In spite of the unusual depth of the two tests, however, it remains to be proved that a salt dome lies under the Goose Creek field; for although the pool is in the heart of the salt dome country and has the characteristics of a salt dome, no test there has ever drilled into salt. And so Goose Creek must still be classed as a non-salt dome field, like Lockport, Orange, Welsh and Sweet Lake.

Besides Gladys 6, the Yount-Lee Oil Company has drilled more than half a dozen other tests at Spindle Top below 6000 feet, but the deepest production that it obtained there was in Fee 27 at 5879 feet.

Several deep tests have been drilled at Lockport, Louisiana, by the Vacuum Oil Company-Gulf Refining Company joint interests; the deepest being Lock-Moore 4, abandoned at 6418 feet.

Humble Oil & Refining Company's Simms-Smith 74, which has just been abandoned at Goose Creek, was really in wildcat territory, as was No. 73. No. 73 was over a mile northeast of the old field and 1600 feet from the nearest production; and No. 74 is 2200 feet east and 950 feet north of No. 73.

Drilling to Check Domes Geophysically Located

Houston.—In the Texas division of the Gulf Coast, as in Coastal Louisiana, there are now various areas, outlined by geophysical instruments as probable salt domes or structures, which are being tested for the first time by actual drilling.

Among these is a structure just south of Almeda, Harris County, where South Texas Petroleum Company is drilling around 2350 feet in sticky shale in Hicks-Higbee 1. In Galveston County, one mile northwest of Dickinson, Republic Production Company is reaming at 3815 feet in Lobit 1; this area was outlined by torsion balance, and is believed to be a structure, or if a dome, a very deep one. Needville, Fort Bend County, was likewise discovered by torsion balance, and if a dome exists there, is very deep. At Needville the South Texas Exploration Company tested salt water in a sandy shale at 4995-5005 feet and is preparing to drill deeper. In Chambers County at Hankamer, where Gulf Production Company found indications of a salt dome with the seismograph, that company is now down to 3865 feet in gumbo and lime in Wilborn 1. Besides the above mentioned areas, the geophysical prospects of the Texas Gulf Coast being drilled upon now for the first time include the Port Neches prospect, about midway between the Spindle Top and Orange fields, on the Orange County side of the Neches River, where The Texas Company is rigging up Kuhn 1; and the Shepherds Mott area, Matagorda County, where Crossland et al are drilling gumbo at 2910 feet in Hawkins 1; the basis for the drilling being a torsion balance survey; and Mykawa, Harris County, a torsion balance prospect, where Humble Oil & Refining Company is drilling at 5332 feet.

The Texas Company Starts Terrebonne Tests

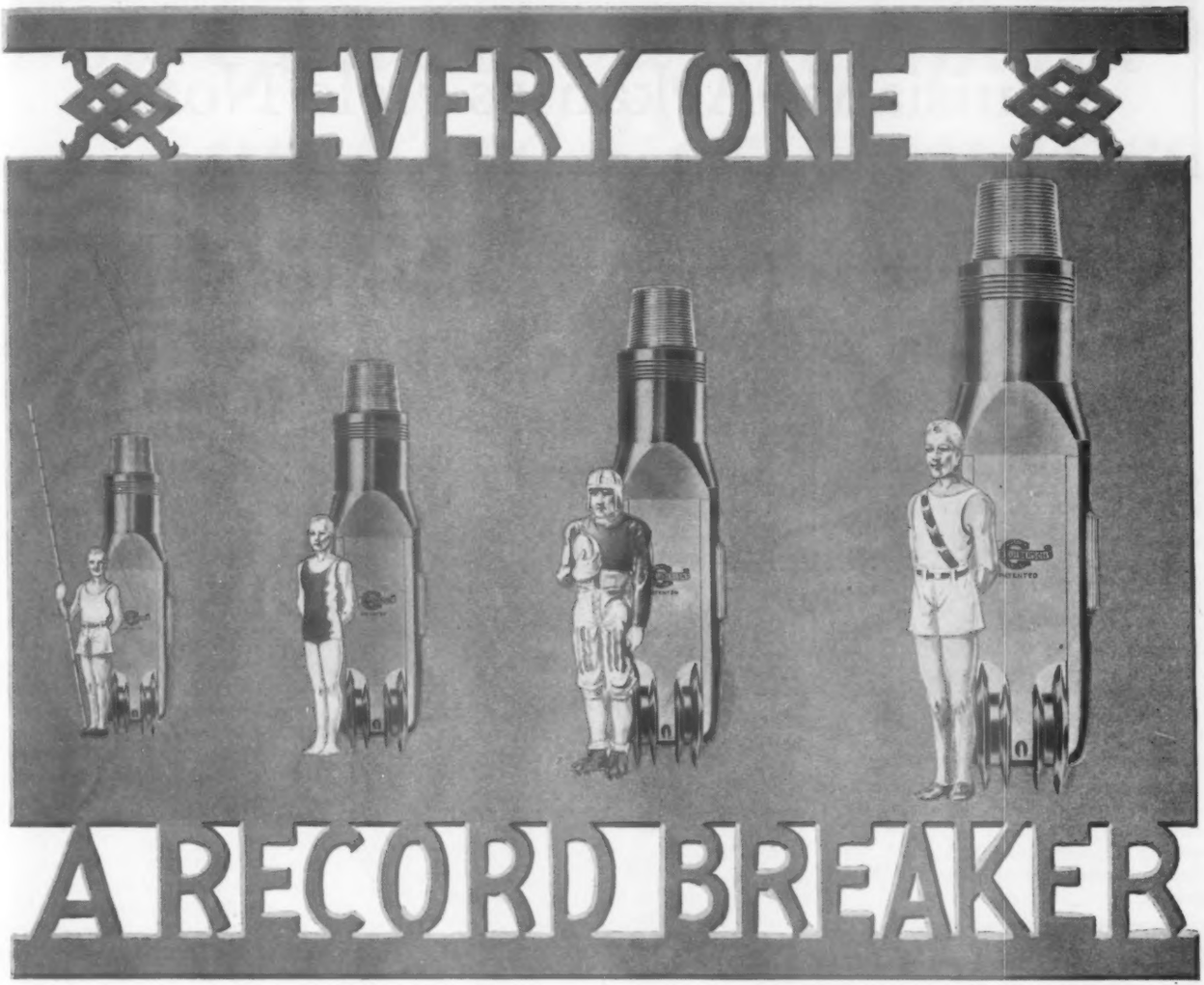
Houston.—The Texas Company has made two additional locations in Terrebonne Parish, Louisiana, on domes which it acquired from the Louisiana Land & Exploration Company, making a total of six domes in that parish on which it has made one location each. In addition, it has made one location on each of two domes in Cameron Parish and is drilling a test on the Vermilion Bay dome, Iberia Parish. There remains only one dome, located in Terrebonne Parish, on which the company has not yet made a location toward fulfilling the agreement which it made last November with the Louisiana Land & Exploration Company for developing 10 domes, nine of which were discovered and controlled entirely by the Louisiana Land & Exploration Company.

The two most recent locations in Terrebonne Parish are: Dog Lake Bayou A-1, located 1550 feet west and 300 feet south of the northeast corner of Section 6-22s-16e; and Four Isle Bayou B-1, located 1725 feet south and 925 feet west of the northeast corner of Section 23-21s-16e.

As yet not much work has been actually started. The Texas Company recently established South Louisiana headquarters at Lafayette, in charge of A. B. Patterson, formerly general superintendent for the Texas Production Company in Colorado, and Mr. Patterson has been busy organizing his men and his work. The Texas Company in its deal with the Louisiana Land & Exploration Company agreed to drill a minimum of four tests on each of the nine domes which the Louisiana Land & Exploration Company discovered, using geophysical methods; and to operate on a tenth dome, East Hackberry.

Houston.—On February 4, exactly a month after it was completed, Morris 1, of the South Texas Petroleum Company (Cullen and West) at Humble, was making approximately 1600 barrels of oil per day on a one-half-inch choke. Initial production was 2500 barrels, and the total depth is 5347 feet.

The same owners are now down 2080 feet in Morris 3 in this part of the Humble field. Morris 1 is the deepest producer ever finished at Humble. It is in the southeast part of the field.



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Louisiana--Arkansas Field Notes

Drilling at Campagnolle Shows Appreciable Loss

SHREVEPORT, La.—With operations in Champagnolle steadily dropping off, there being 20 rigs running now where there were approximately 35 a fortnight ago, and with the recent cut in crude tending to curtail new drilling, interest in this territory centered during the last week on the Monroe and Richland Parish, Louisiana, gas fields where there has been renewed activity following in the wake of the announcement of the starting of a 450-mile gas line to St. Louis, to be built by the Standard Oil Company of New Jersey and associated companies.

During the last week there were nine drilling permits issued by the conservation commission for tests in these two areas, making 15 operations authorized there since announcement of plans for the big gas line.

Tests Failures

Champagnolle, after being extended a short distance east and south week before last experienced a lean week during the last seven days. A test east of production in the southeast part of the northeast extension of Champagnolle tested salt water at 3238 feet. This was Magna Production Company's El Dorado Realty Company 2, in Section 8-17-13. It is the second test in that section to end disastrously and apparently proves that production does not lie in that direction. Little effort has been made to extend the northeast extension in Sections 6 and 7-17-13, outside those sections in any direction except into Section 8. However, due to the lenticularity of Champagnolle these two failures in Section 8 may not be a final criterion. Ohio Oil Company's Alphin 2, in NW NW, Section 6-17-13, which after being a failure was deepened to 3058 feet and is flowing at the rate of 500 barrels daily, according to estimates, a 24-hour gauge not yet having been obtained.

Ohio Oil Company's Carroll 3, Section 6-17-13, which extended production one-eighth of a mile eastward more than a week ago and was estimated to be good for 300 barrels daily from 2995 feet, was gauged this week as a 110 barrel well. It is flowing by heads. The wells already mentioned and two gassers by O. W. Estes comprised the total of completions for the Union County area. Estes' W. K. Gregory 1, Section 15-17-14, that extended production a quarter of a mile south, was gauged at 35 million feet of gas and a spray of oil, with total depth of 2852 feet. The same operator's Rowland 6, Section 15-17-14, was plugged back to 2830 feet during the week and completed as a 20 million foot gasser.

In Ouachita County the Little Fay Oil Company completed Cannada 2, in Section 24-15-16, at 2081 feet with 36 feet of sand, pumping 45 barrels, and in 33-15-15 of the same county and in the center of the old Smackover field, Phillips Petroleum Company added Farrish 10 at total depth of 1984 feet, pumping 80 barrels.

There was only one producer in North Louisiana, Bayou State Oil Corporation's Land 6, in the Hosston shallow area of Caddo Parish, which is pumping seven barrels at total depth of 1020 feet. In the Pine Island field of Caddo, Thomason and Fitzsimmons abandoned Muslow 7, Section 31-21-15, at 2230 feet as a dry hole.

Benedum and Trees, after hitting 25 million feet of gas and about 100 barrels of salt water in State 1, a wildcat between the old Naborton field of De Soto Parish, and the Elm Grove gas area of Bossier Parish, at 2631 feet, the test later going "dead" deepened the hole and struck salt water at 3000 feet where the hole was abandoned during the week.

Bethany Gas Field

The shallow horizon of the Bethany gas area of Panola County, East Texas, during the week contributed a two and a half million foot gasser, at 972 feet.

Only six new locations were formally announced during the last week, four in North Louisiana and two in Arkansas, both of the latter in the Champagnolle field.

Carter and Collins will drill two rank wildcats in the Bently area of Grant Parish, Louisiana. They are rigging up for Bell Lumber Company 1, Section 29-7-1w, and have derrick up for Hardtner and Tannehill 1, in Section 9-6-1w. M. Meyer has derrick up for a test in the Elm Grove gas area of Bossier Parish. This is Fee 1, in Section 31-16-11. Magnolia Petroleum Company has derrick up for Fortzon 3, in Section 4-12-11, De Soto Parish, Naborton district. Two previous wells on this lease were drilled by Williams Brothers.

Ohio Oil Company has made location in the northeast extension of Champagnolle for Adams 1, SW NW, Section 7-17-13, and on the west side of the field Rovenger Oil Company is rigging up for W. H. Perdue B-2, SE NE, Section 9-17-14.

On the southeast side of Champagnolle, Magnolia Petroleum Company is trying to kill off the gas in W. K. Gregory 2 at 2822 feet to drill deeper. In the Ouachita County part of Smackover, Shell Petroleum Company is rigging up to cement bottom and perforate casing in Snyder 3, Section 34-15-15.

Major companies now have practically all the gas producing acreage in the Richland gas field. Following on the heels of the sale of W. C. Feazel and associates of 3200 acres with three gas wells in Richland to the Industrial Gas Company for $370,000 cash, and the sale to the same company of 1500 acres in the same field by J. H. Mann and E. M. Jones for $100,000 cash, some rumors of a gasoline absorption plant for that area by the Palmer Corporation of Louisiana, which has large holdings in Northeast Louisiana. Confirmation of the report of the contemplated gasoline absorption plant could not be secured here, but semi-officially the report is said to be true. However, the size of the plant has not been announced.

Haynesville Failure

In old Haynesville district of Claiborne Parish, Smitherman and McDonald, after testing dry in Miller 1, in Section 17-23-8, at 4320 feet, are coring ahead at 4350 feet. In the same parish Dixie Oil Company is fishing core barrels at 5003 feet in Gilbert 1, Section 27-21-5w. Arkansas Natural Gas Corporation is preparing to abandon Tidwell 1, in Section 29-22-11, a wildcat in Bossier Parish, after testing dry with a slight show of oil at 3111 feet. The test is several miles southwest of production in the Sarepta field.

In De Soto Parish Carlton Drilling Company is shut down awaiting orders at 1607 feet after testing dry at 1385 feet and at 1607 feet.

Joe Hurley, who has been delaying testing of Arkansas Land & Timber 1, in Section 29-16-12, Calhoun County, Arkansas, after setting 6⅝-inch casing at 2303 feet, total depth being 2314 feet, while

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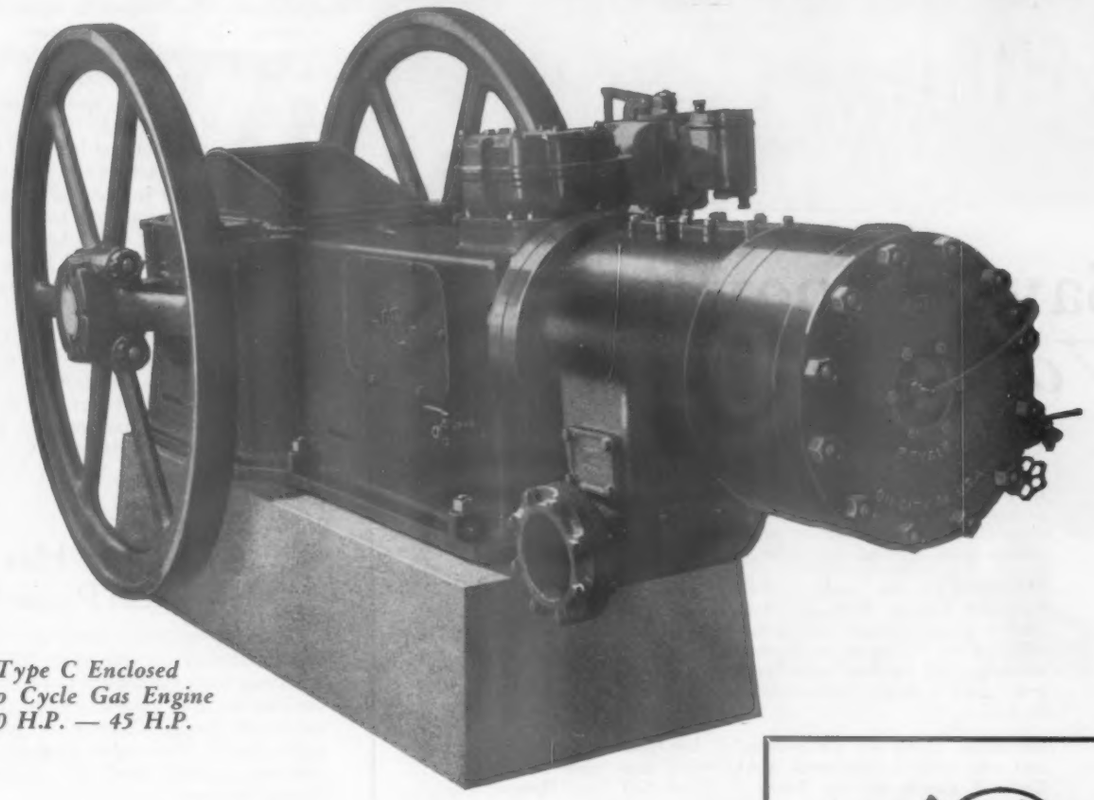

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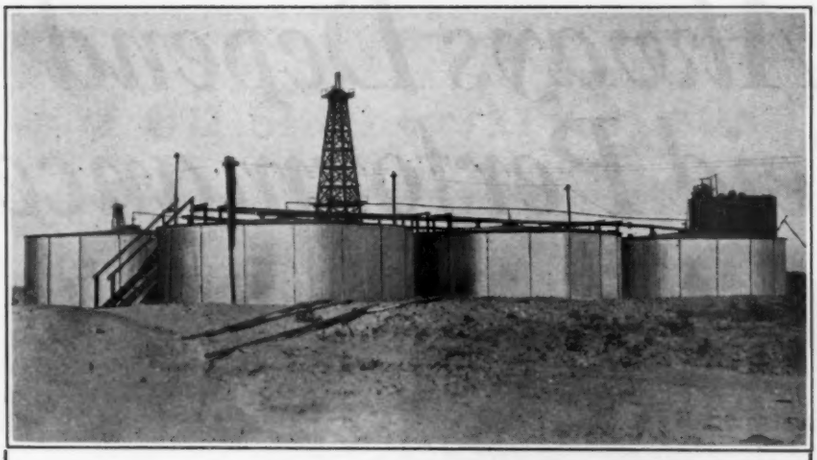

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titles to adjoining acreage was being cleared, has been forced to defer a test for another reason, high water. When the test will be made is still uncertain.

Ohio Oil Company is making a deep test of Southern Lumber Company 2, in Section 19-16-9, Bradley County, drilling now being under way at 3204 feet. Arkansas Natural Gas Corporation is shut down awaiting orders at 3609 feet, in W. H. Parks 1, a wildcat in 26-8-24, Logan County. E. A. Martin, Trustee, is waiting orders at 2850 feet in Dale 4, a wildcat in 23-15-26, Miller County.

An early test is expected in Wilson Brothers' McDonald 1, Section 25-15-18, Ouachita County, a test between the Louann sector of Smackover and the Stephens field. A fishing job has been under way in the hole for some time, but it has finally been cleaned out, depth being 2618 feet. The first hole drilled had to be junked. In this hole an interesting show of oil was obtained around 2800 feet.

In Union County, Calgo Oil Company is coring ahead in Primm 1, a wildcat in Section 9-18-17, after testing dry in a drill stem test at 3888 feet. In the northeast extension of Champagnolle, Lion Oil Refining Company's deep test, Union Sawmill Company 5, in Section 7-17-13, is coring at 4152 feet.

Arkansas Has Six Geological Projects

Little Rock, Ark.—Six major projects are under way for the year 1929 by the Arkansas State Geological Department, according to the annual report of State Geologist George C. Branner, just made public here. Nine other projects contingent on available funds are contemplated during the year.

The six projects under way are:

1. Publication of the report of W. C. Spooner, geologist, on the oil and gas possibilities of the lowlands or coastal plains area of South and East Arkansas.

2. Publication of Carey G. Croneis' report on conditions favorable for gas accumulations in the Arkansas River valley area of West Arkansas.

3. Publication of Carle H. Dane's cooperative report on the Upper Cretaceous formations of Southwest Arkansas.

4. Publication of a state geological map.

5. Completion of field work in connection with ground water conditions in the rice irrigation area of Arkansas.

6. Completion of field work in connection with the zinc and lead report on North Arkansas.

Included in the projects that are contemplated are a survey of the commercial clays of the state, detail work on oil and gas geology, survey of sand and gravel deposits, survey of building stones, survey of phosphate bearing rocks, study of soil loss due to erosion, and survey of antimony region of Southwest Arkansas and of the iron-bearing region of North Arkansas.

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News From Rocky Mountain Fields

Great Falls, Mont. — Temperatures in Montana's oil fields have varied from 30 to 50 degrees below zero during the last 10 days, and operations in all districts have therefore been practically at a standstill. Even the Pondera field, which is powered by electricity, has been forced to slow down almost to a snail's pace, with no completions reported, and no new wells started. Wildcat operations are snowbound, the crews being unable to leave the locations, and the owners unable to get in.

Artesia, N. M.—Developments in Lea County have been most interesting recently. The Maljamar Oil & Gas Company's Pearsall 2, Section 33-17-32, had a very good showing of oil and gas from 3800 to 3900 feet, and again at 3912 feet. It is now drilling below 4080 feet, with increased showings reported. This is in the northwestern corner of the county. In the southeastern part, The Texas Production Company's No. Shepherd 1, Section 6-26-37, has the tools lost in the hole at 3218 feet, but the well continues to spray 80 to 100 barrels of crude. Texas Production Company completed Cagle 1, Section 9-26-37, as a gas well; it produced 75 million feet. Marland Oil Company completed Sholes 1, also as a gasser. It is on Section 19-25-37.

Roswell, N. M.—Walter B. Lang of the United States Geological Survey has been elected president of the newly-formed Geological Society of New Mexico. Frank Proutt of the Empire Gas & Fuel Company is vice president. Burton Hedley of the Southern Petroleum Company is secretary, and Morgan J. Davis of the Humble Oil & Refining Cmopany is treasu r. This society plans the promotion of the science and study of geology in New Mexico.

Denver, Colo.—The Round Butte wildcat being drilled by Stanley Barrows and associates has created much interest recently by its report of a showing of liquid asphalt at 1893-1900 feet. This well is on Section 7-11n-68w, in Larimer County, Colorado; it is north of the Wellington dome, and just south of the Wyoming line. It will be deepened to the Sundance unless commercial production is obtained in the Morrison.

La Junta, Colo.—A test will be drilled soon southeast of the town of Lamar on what is known as the Charles Maxwell ranch. Lamar is in Powers County, Colorado, about 52 miles east of La Junta.

Artesia, N. M.—A wildcat well which has extended the producing area in the Artesia district is the Flynn, Welch & Yates Jackson 1, Section 13-17s-30e, in Eddy County, which headed up a week ago and made a flow of 40 barrels, and later made another of 50 barrels. This oil tests 35.9 gravity. The well is also making about 500,000 cubic feet of gas; depth is 3452 feet. Before deepening the owners plan to install a new casinghead and make a swab test.

Casper, Wyo.—Several changes in personnel in interests identified with the Ohio Oil Company have been announced in the Mountain States. W. M. Holland, superintendent of operations, has been made president of the Billings, Montana, gas company, and J. E. Moore, who has been superintendent of that company, has been made general manager. Mr. Holland replaces C. E. Hetzler, who has been president of the Billings company since 1922, and who will now become manager of the Mountain Fuel Supply Company, at Rock Springs, Wyoming. This company is one of the units of the Western Public Service Corporation, the holding concern for a number of companies identified with the project of piping gas from Southwestern Wyoming to Utah. Mr. Holland will continue to have his headquarters in Casper. At the same time that he became president, he was elected a director of the Billings Gas Company, along with C. L. Fleming of Findlay, Ohio.

Casper, Wyo.—Company scouts here report that litigation threatens any further development at the Red Canyon well near Edgemont, South Dakota. The ownership of the title is in question.

This well was brought in accidentally when an attempt was made to loosen the casing by use of a charge of nitroglycerine. In the summer of 1925 a showing of oil was encountered in a stratum at 2085-2091 feet, but because of considerable water in the hole there was no effort made to test the showing. Casing was then set and hole drilled to 2218 feet, where it has been standing until this January, when an attempt was made to abandon it.

The Edgemont syndicate which owns the well had recently arranged with one of the major operating companies to take over the test and deepen it; however, this plan will probably not go through, due to the title difficulties.

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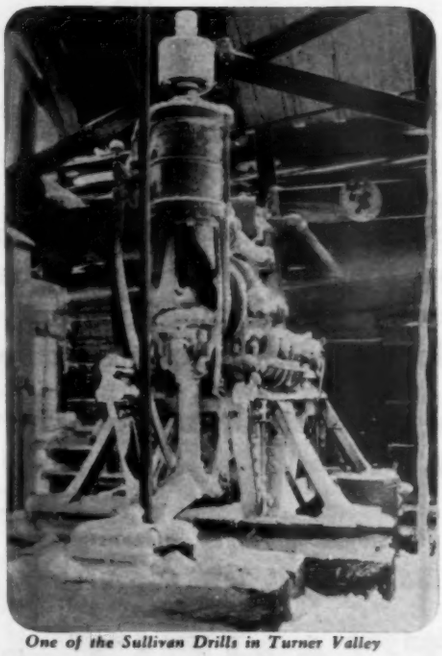

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State.....

News From Rocky Mountain Fields

Great Falls, Mont. — Temperatures in Montana's oil fields have varied from 30 to 50 degrees below zero during the last 10 days, and operations in all districts have therefore been practically at a standstill. Even the Pondera field, which is powered by electricity, has been forced to slow down almost to a snail's pace, with no completions reported, and no new wells started. Wildcat operations are snowbound, the crews being unable to leave the locations, and the owners unable to get in.

Artesia, N. M.—Developments in Lea County have been most interesting recently. The Maljamar Oil & Gas Company's Pearsall 2, Section 33-17-32, had a very good showing of oil and gas from 3800 to 3900 feet, and again at 3912 feet. It is now drilling below 4080 feet, with increased showings reported. This is in the northwestern corner of the county. In the southeastern part, The Texas Production Company's No. Shepherd 1, Section 6-26-37, has the tools lost in the hole at 3218 feet, but the well continues to spray 80 to 100 barrels of crude. Texas Production Company completed Cagle 1, Section 9-26-37, as a gas well; it produced 75 million feet. Marland Oil Company completed Sholes 1, also as a gasser. It is on Section 19-25-37.

Roswell, N. M.—Walter B. Lang of the United States Geological Survey has been elected president of the newly-formed Geological Society of New Mexico. Frank Proutt of the Empire Gas & Fuel Company is vice president. Burton Hedley of the Southern Petroleum Company is secretary, and Morgan J. Davis of the Humble Oil & Refining Cmopany is treasurer. This society plans the promotion of the science and study of geology in New Mexico.

Denver, Colo.—The Round Butte wildcat being drilled by Stanley Barrows and associates has created much interest recently by its report of a showing of liquid asphalt at 1893-1900 feet. This well is on Section 7-11n-68w, in Larimer County, Colorado; it is north of the Wellington dome, and just south of the Wyoming line. It will be deepened to the Sundance unless commercial production is obtained in the Morrison.

La Junta, Colo.—A test will be drilled soon southeast of the town of Lamar on what is known as the Charles Maxwell ranch. Lamar is in Powers County, Colorado, about 52 miles east of La Junta.

Artesia, N. M.—A wildcat well which has extended the producing area in the Artesia district is the Flynn, Welch & Yates Jackson 1, Section 13-17s-30e, in Eddy County, which headed up a week ago and made a flow of 40 barrels, and later made another of 50 barrels. This oil tests 35.9 gravity. The well is also making about 500,000 cubic feet of gas; depth is 3452 feet. Before deepening the owners plan to install a new casinghead and make a swab test.

Casper, Wyo.—Several changes in personnel in interests identified with the Ohio Oil Company have been announced in the Mountain States. W. M. Holland, superintendent of operations, has been made president of the Billings, Montana, gas company, and J. E. Moore, who has been superintendent of that company, has been made general manager. Mr. Holland replaces C. E. Hetzler, who has been president of the Billings company since 1922, and who will now become manager of the Mountain Fuel Supply Company, at Rock Springs, Wyoming. This company is one of the units of the Western Public Service Corporation, the holding concern for a number of companies identified with the project of piping gas from Southwestern Wyoming to Utah. Mr. Holland will continue to have his headquarters in Casper. At the same time that he became president, he was elected a director of the Billings Gas Company, along with C. L. Fleming of Findlay, Ohio.

Casper, Wyo.—Company scouts here report that litigation threatens any further development at the Red Canyon well near Edgemont, South Dakota. The ownership of the title is in question.

This well was brought in accidentally when an attempt was made to loosen the casing by use of a charge of nitroglycerine. In the summer of 1925 a showing of oil was encountered in a stratum at 2085-2091 feet, but because of considerable water in the hole there was no effort made to test the showing. Casing was then set and hole drilled to 2218 feet, where it has been standing until this January, when an attempt was made to abandon it.

The Edgemont syndicate which owns the well had recently arranged with one of the major operating companies to take over the test and deepen it; however, this plan will probably not go through, due to the title difficulties.

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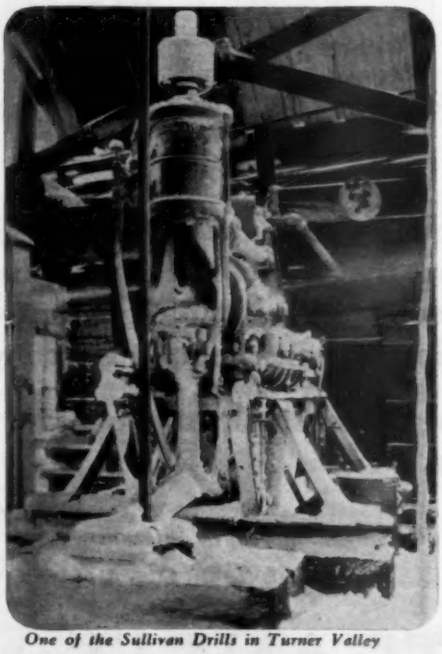

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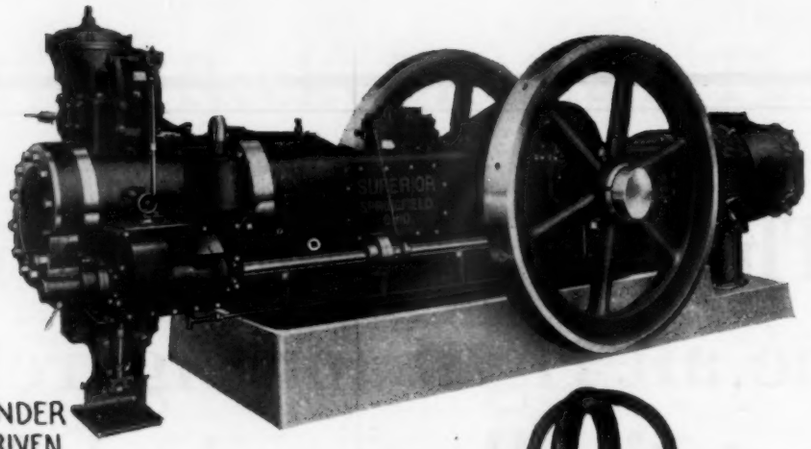

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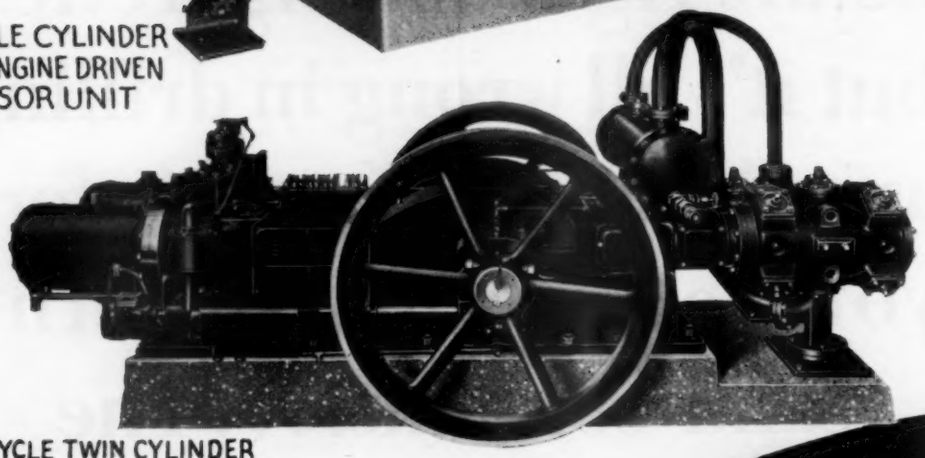

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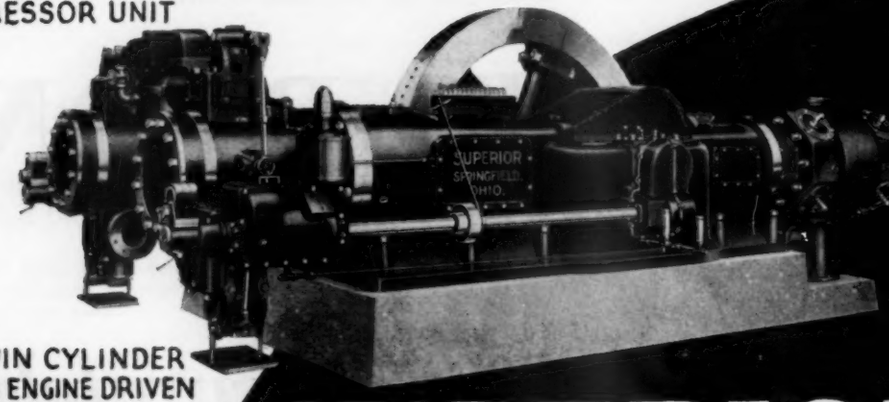

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THE
NATIONAL SUPPLY
COMPANIES

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Empire O. & R., Brandenberger "A" 4, sw ne ne 22-27-5e	100	2757
COFFEY COUNTY—		
Union Gas Co., Winzler 1, nw sw, 9-22-14e	¶1½	1348
ELK COUNTY—		
S. H. Littral, Townlot 1, cel sw se sw 10-31-10e	50	2003
Croft & Hunt, Webb 1, ne nw nw 15-31-10e	*	2020
GREENWOOD COUNTY—		
Nelson, Kemmett et al, Claycomb 1 ne 1-25-8e	*	2475
W. H. Nelson et al, Claycomb 1, se sw nw, 6-25-9e	*	2372

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Magnolia, G'l 2, ne se se 23-1s-3w	35	2560
CREEK COUNTY—		
Madden & Madden, Childers 1, nw ne 24-15-9e	125	3454
Magnolia, Emarthla 5, ne sw 5-16-8e	75	3547
J. F. Wallace, McComas 2, nw 2-17-11e	¶2	1959
Pontiac Oil Co., Fulsom 11, ne sw sw, 13-17-10e	7	1942
Twin, Coachman 5, sw nw ne 20-17-7e	60	2810
Magnolia, Musselman 23, ne se nw ne 8-18-7e	15	2564
H. U. Bartlett, Sewell 1a, ne 18-19-9e	¶2½	2131
Shaffer O. & R., Kelly 1, nw ne 7-19-7e	125	3157
Anderson et al, Manuel 1, se ne se 16-19-7e	50	2755
Transcontinental, Taylor 1, nw sw se 10-14-9e	*	3734
Hall & Donnelly, Johnson 1, ne se nw 17-14-10e	*	3520
Continental & Detrick, Unallotted 1, sw 7-16-12e	*	2822
Jackson & Wise, Sapulpa 3, c nw ne 3-17-11e	*	1964
Anthony & Wayne, Deere 1 nw ne 13-18-8e	*	3376
GRANT COUNTY—		
Consolidated, Forsythe 1, se ne ne nw, 2-27-3w	¶10	4288
KAY COUNTY—		
Tidal, Cole 2 (OWDD) c se se, 18-29-1e	105	3328
Nehr, Wilson et al, Boesch 1, se nw se, 8-27-1e	¶1	913
Marland, North Lease No. 23, (OWDD) nw sw sw, 6-26-1w	80	2985
Wilson & Wright, Schmidt 1, ne se, 15-27-1e	*	725
KIOWA COUNTY—		
Russell & Sloan et al, Petty 1, ne sw se, 14-6n-15w	*	500
Johnson McDowell, Kelle 1, c sw ne, 6-6n-15w	*	2707
J. R. Travis, Hobbs 1, cwl nw sw, 7-6n-16w	*	503
W. C. Adams, Hamilton 1, nw sw, 2-6n-17w	*	603
LINCOLN COUNTY—		
Shaffer, Pinkston 1, ne sw, 23-15-5e	*	4222
LOGAN COUNTY—		
Shell, Rouse "B" 1a, ne, 19-19-4w	¶13½	4640
MUSKOGEE COUNTY—		
W. J. Metzger, Francis 5, cnl sw sw, 1-14-18e	30	959
Grubbs & Young, Friday 5, sw nw, 8-15-15e	140	1201
Siouz Oil Co., Jordan 3, nw se se se, 14-13-18e	*	787
Bement Oil Co., Flowers 4, cwl sw ne, 5-13-16e	*	1903
OKFUSKEE COUNTY—		
Atlantic Oil Prod. Co., Robinson 3, nw sw, 12-10-11e	50	1530
Pure, Anderson 1, ne se, 23-11-10e	*	3315
OKMULGEE COUNTY—		
J. A. Swindler, Lewis 12, nw ne se, 20-15-14e	*	2341

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	7	7	4	5	2	..	1	2	280	1,096
California	25	19	23	18	..	..	2	1	37,175	44,850
Illinois	1	6	1	3	..	1	..	2	105	35
Indiana	1	..	1	..	..	..	..	..	30	...
Kansas	6	14	2	7	1	3	3	4	150	1,340
Kentucky	32	10	20	7	..	..	12	3	321	280
Louisiana	10	11	3	2	..	5	7	4	1,457	55
Michigan	5	16	2	5	..	..	3	11	1,550	700
Ohio	39	51	13	24	14	19	12	8	400	485
Oklahoma	75	60	46	34	8	7	21	19	24,805	5,986
Pennsylvania	5	22	1	21	3	..	1	1	500	101
Texas	136	169	80	83	5	15	51	71	75,817	73,208
West Virginia	20	30	3	7	17	16	..	7	210	42
Total	362	415	199	216	50	66	113	133	142,800	128,178
Increase this week	..	..	..	..	..	..	..	..	14,622	...
Decrease this week	53	..	17	..	16	..	20	..	...	...

Company, Well and Location	Initial Production Bbls.	Depth
Winemiller Oil Corp., Warren 1, sw ne, 13-14-11e	*	4086
OSAGE COUNTY—		
Stephenson, Henry & Rock, No. 1, se nw, 11-26-8e	1200	2162
Marland & Gypsy, No. 1, sw ne, 22-24-7e	90	2931
Marland & Gypsy No. 1, se nw, 22-24-7e	300	2927
Wm. D. Gray No. 3, csl se, 34-24-8e	2743	2572
Mid-Kansas O. & G. No. 3, se ne sw, 36-22-8e	75	460
Oklahoma Nat'l Gas No. 1661, ne sw sw, 27-21-11e	*	1891
PAWNEE COUNTY—		
Thompson & Black, Lennock, nw sw sw, 14-20-9e	25	2614
PAYNE COUNTY—		
Mulbery Oil Co., Miller 1, se ne sw, 27-19-4e	*	3772
PONTOTOC COUNTY—		
Westheimer & Daub, Wade 8, se nw se, 19-5-8e	400	2772
Louisiana O. R. Co., Perry 20, sw nw ne, 19-5-8e	1000	2628
Louisiana O. R. Co., Perry 19, nw ne, 19-5-8e	600	2658
Dever Prod. & Ref. Corp., Warfle 1, cnl nw se ne, 20-5-8e	*	2765
POTTAWATOMIE COUNTY—		
Gypsy, Roseman 2, sw se nw ne, 26-7-4e	597	4095
Sinclair, Nelly 4, sw nw sw, 25-7-4e	560	4235
Interocean Oil Co., McGee 3, (OWDD) se ne ne, 23-7-4e	200	4285
Magnolia, Nicholas 1, nw, 31-7-5e	195	4268
Sinclair, Nadash 4, sw nw, 29-7-5e	13	4172
Amerada, Green 1, nw, 20-8-5e	1680	4098
Magnolia, Youts 7, se nw sw, 20-7-5e	1421	4592
Sinclair, Bellars 4, ne, 19-8-5e	1245	4073
Gypsy, Miller 1, sw se se, 18-8-5e	785	4159
Amerada & Barnsdall, Wallace 1, sw, 17-8-5e	880	4105
Wilcox O. & G., Smith 1, nw se, 8-8-5e	1142	4160
SEMINOLE COUNTY—		
Sinclair, Nakatoche 5, sw ne sw, 18-5-8e	45	2475
T. B. Slick, Chilcoat 1, nw ne, 6-7-7e	35	4020
Marland & Shaffer, Harris 1 se sw, 4-7-7e	715	4204
T. B. Slick, Wood 2, nw ne sw, 26-7-6e	342	3209
Shell, Glass 1, nw se, 26-7-6e	¶41	3208
Skelly & Atlantic Oil Prod. Co., Sherry 4, ne nw sw, 6-9-6e	278	4657
Skelly, Sheppard 3, nw sw nw, 6-9-6e	1025	4305
Magnolia, Moore 1, nw ne se, 24-9-5e	504	4224
Burke-Greis, Mayes 1, se ne ne, 1-9-5e	1600	4414
Tidal, Walker 3, se ne se, 35-10-5e	55	4100
Tidal, Walker 2, ne se se, 35-10-5e	3340	4075
STEPHENS COUNTY—		
Amerada, Hanson 4, nw sw, 12-1s-4w	50	3620
Wirt Franklin, Bell 1, se sw sw, 13-1s-4w	70	3852
Wirt Franklin, Bell 2, ne sw sw, 13-1s-4w	180	2842
Bunn Marvin, Williamson 1, ne nw se, 12-1n-6w	*	1420
TULSA COUNTY—		
E. P. Bailey et al, Unallotted 1a, cnl sw, 34-19-11e	*	2391
WAGONER COUNTY—		
McCracken, Childers 5, ne se ne, 21-18-17e	¶5	801

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
FRUITVALE—		
Mohawk Oil Co. No. 2, 27-29-27	250	3630
Pacific Eastern Production Co., Lahore 1, 21-29-27	650	3935
KERN FRONT—		
The Texas Co., Lehman 8	275	3935
LONG BEACH—		
Graham and Loftus, Warburton 1	1200	6900
McMillan Pet. Prod. Co. No. 7	750	4545
Shell Co., Alamitos 36	200	6307
Cresson 13	300	7370
Wilbur 6	1200	6600
MONTEBELLO—		
Standard Oil Co., Whitehead 3	150	3785
POSO CREEK—		
General Pet. Corp., Heisen 11, 16-27-28	300	1585
Reynolds Oil and Gas Co., No. 1, 6-28-29	200	1575
SANTA FE SPRINGS—		
General Pet. Corp., S. F. 14	1300	5858
S. F. 168-C	3200	5802
S. F. 168-B	2100	5804
S. F. L87-B	5000	5780
Comm. 186-F	2400	5000
Comm. 191-B	4100	5765
Comm. 189-D	1400	5736
Shell Co., G. H. N. 15	1800	5725
Standard Oil Co., Koontz 11	1600	5800
Texas Co., Batson 5	3300	5300
Weaver 5	3250	5095
SEAL BEACH—		
Standard Oil Co., San Gabriel 9, wo	2250	5430

EASTERN STATES

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
VIGO COUNTY—		
Pierce & Co. Shattuck 3	30	2256

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
ST. CLAIR COUNTY—		
Ohio Oil Co. Dyroff 1	105	400

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
MUSKEGON COUNTY—		
Eureka O. & G. Hewitt 1	1500	2021
Diamond O. & G. Co. Jager 1	50	2064
Commonwealth O. & G. Co. Tierwe.ler 1	*	2083
Puritan O. & Goldboss, McLaughlin 1	*	1745
E. L. Robinson Flentze 1	*	1700

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
NOBLE COUNTY—		
Berry & Rich, Rich 1	7	....
William Dennis, Dennis 1	*	....
Local Oil Co. Mallet Heirs 1	5	1146
Noble Oil Co. Smithberger 2	3	944
MORGAN COUNTY—		
Hollowell & Co. Ball 1	¶¼	1631
Ohio Fuel Gas Co. Thomas 5	¶½	591
WASHINGTON COUNTY—		
Binegar & Herlin Ruble 3	¶1¼	1041
CARROLL COUNTY—		
Jupiter Oil Co. Brown 1	*	1022

CENTRAL OHIO

ASHLAND COUNTY—		
Ohio Fuel Gas Co. Kettering 1	*	....
Logan Gas Co. Smith 1	*	....
Alberson 1	¶½	....
The Kemrow Co. Fluke 3	¶2¼	....
Miller & Co. Smith 5	20	....
Robinson & Co. Hawks 1	*	2941
PERRY COUNTY—		
Miller & Co. Wilson 1	27	....
Ohio Fuel Gas Co. Shaffel 1	192	2762
Planet Oil Co. Petty 2	40	3012
Crowley & Co. Sowers 1	50	3523
LICKING COUNTY—		
Emerald Pet. Co. Martin 2	10	811
Hulse & Kundtz, Moran 2	1	658
Preston Oil Co. Wright 11	10	777
WAYNE COUNTY—		
Harmon & George Dr. Biddle 1	¶1	....
F. E. Barnhart & Co. McCauley 1	*	....
Logan Gas Co. Sauer 1	¶½	....
SUMMITT COUNTY—		
East Ohio Gas Co. Gebauer 1	*	....
H. H. Cupler, Dethoff 1	*	....
F. A. Brendall & Co. Wilcox 2	¶7½	....
ATHENS COUNTY—		
Logan Gas Co. Guthrie 2	¶¼	1335
Kiggins & Co. Lovell 1	¶¼	1428
HOCKING COUNTY—		
Star Coal & Land Co. Fee 1	*	3428
Murray City O. & G. Co. Grummon 2	10	....
MEIGS COUNTY—		
Tyree & Co. Stobart 4	*	633
Ohio Fuel & G. Co. Mayhugh 2	¶½	1632
LORAIN COUNTY—		
Ohio Fuel Gas Co. April 1	¶4¼	....
FAIRFIELD COUNTY—		
City Natural Gas Works, Brucker 1	¶¼	2310
LAWRENCE COUNTY—		
Cashdollar & Co. Nichter 1	¶2	....
KNOX COUNTY—		
East Ohio Gas Co. Strang 1	*	....
JACKSON COUNTY—		
Wheeler & Griffith, Fubanks 1	*	1489

NORTHWESTERN OHIO

HANCOCK COUNTY—		
L. Cramer Shank 1	25	....

PENNSYLVANIA

GREENE COUNTY—		
Philadelphia Oil Co., Isaac Phillips 1	¶2	....
Manufacturers Light & Heat Co. Courtright 1	¶1½	....
Peoples Nat. Gas Co. Zimmerman 1	¶1½	....
Dun-Mar O. & G. Co. Grove 1, ...	*	....
BUTLER COUNTY—		
Phillips O. & G. Co. Hugham 1	500	....

WEST VIRGINIA

CALHOUN COUNTY—		
Hope Nat. Gas Co. Kenney 1	¶2	....
W. H. Bickle Hamilton 1	¶1¼	....
Pure Oil Co. McClain 1	¶1½	....
W. H. Bickel, Borroughs 1	¶1¼	....
United Carbon Co. Favis 2	¶1	....
F. F. McIntosh & Co. McCoy 1	¶1	....
ROANE COUNTY—		
South Penn Oil Co. Stockley 87	100	....
United Carbon Co. Wright 2	¶2	....
King O. & G. Co. Looney 1	¶1¼	....
DODDRIDGE COUNTY—		
W. L. Travis, Sheets 1	¶¼	....
Unknown Parties 1	10	....
HARRISON COUNTY—		
J. W. Johnson, Burley 1	¶1½	....
Radd & Moses, Shahan 1	¶1½	....
GILMER COUNTY—		
Bowser Oil Co. Mitchell 1	¶1½	....
Chartiers Oil Co. Baptist Missionary 9	¶1½	....
JACKSON COUNTY—		
South Penn Oil Co. McCarty 1	100	....
MONONGALIA COUNTY—		
J. H. McDermott & Co. Eddy 1	¶2	....
Consolidated Oil Co. Eddy 1	¶2	....
RITCHIE COUNTY—		
Hope Gas Co. Collins 1	¶¼	....
MINGO COUNTY—		
Public Gas Corp. Closteman 22	¶1¼	....

KENTUCKY

OHIO COUNTY—		
F. M. Sirman, Farmer 8	35	....
Farmer 9	35	....
Creek Drilling Co. Westerfield 5	*	605
J. E. Marsh & Co. Ada Kelley 2	*	450
Snowden-McSweeney Co. Ralph 4	*	765
Ray Bigler & Co. Roach 4	*	600
Ohio Oil Co. Patton 6	16	590
Ohio Oil Co. J. C. Ellis 20	30	....
MCLEAN COUNTY—		
Ohio Oil Co. McManana 1	20	....
HENDERSON COUNTY—		
R. F. Shircliff Triplett 1	20	....
WARREN COUNTY—		
W. B. Cauble Davenport 4	5	920
Ohio Oil Co. Justice 1	1	966
ALLEN COUNTY—		
Snowden-McSweeney Oliver 34	3	402
J. D. White Williams 10	1	363
I. J. Tapp & Co. Hood 2	*	277
D. D. Defenbach Beam 2	*	384
DAVIESS COUNTY—		
Daley & Loman Burton 3	100	....
Wood Oil Co. Cooper 1	*	....
ESTILL COUNTY—		
A. J. Calvert Cox 11	3	....
Superior Oil Corp. West 22	3	....
Griffin 9	*	....
Henderson 28	5	....
Tipton 14	1	....
WAYNE COUNTY—		
Wood Oil Co. Miller Bros 67	2	....
Coffey Oil Co. Coffey 1	*	....
Ciell & Work Koger 1	*	....
POWELL COUNTY—		
James McCoy Oil Co. Hall 2	6	....
JOHNSON COUNTY—		
Swiss Oil Corp. Lyons 33	15	....
MAGOFIN COUNTY—		
Hupp, Duff & Co. Frazier 6	20	....
KNOX COUNTY—		
Unknown Red Bird Creek 1	*	....
BRECKENRIDGE COUNTY—		
C. L. Dunbar Gibson 1	*	2300

ARKANSAS

OUACHITA COUNTY—		
Little Fay Oil Co., Cannada 2, 24-15-16	45	2081
Phillips Pet. Co., 33-15-15	80	1984
UNION COUNTY—		
O. W. Estes, Rowland 6, 16-17-14	¶20	2830
Magna Prod. Co., El Dorado Realty Co. 2, 8-17-13	*	3238
Ohio Oil Co., Carroll 3, 6-17-13	110	2995
O. W. Estes, W. K. Gregory 1, 15-17-14	¶35	2852

SOUTH LOUISIANA

EAST HACKBERRY—		
Calcasieu Oil Co., Watkins 4, wo	*	3966
HACKBERRY—		
Cameron Oil Co.-Rycade Oil Corp., Vincent 1	*	3825
LOCKPORT—		
Vacuum-Gulf, Miller 22	1300	4340
SULPHUR—		
Union Sulphur Co., Fee 733	*	3505
VINTON—		
Gulf, Star-Vincent 47, dd	*	3630
Salt Dome Oil Co., Shaw 1	150	2940

NORTH LOUISIANA

CADDO PARISH—		
Bayou State Oil Corp., Land 6, 22-22-15	7	1020
Thomason & Fitzsimmons, Muslow 7, 31-21-15	*	2230
DE SOTO PARISH—		
Benedum & Trees, State 1, 22-14-12	*	3000

TEXAS

EAST TEXAS

Panola County—		
Kirby-Rowe Drilling Co., T. C. Adams 1, Ezekiel Jones sur,	¶2½	972

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BARBERS HILL—		
Yount-Lee Oil Co., Chambers County Agricultural Co. 1	4700	5318
Richardson 2	30	2080
BIG CREEK—		
Navarro Oil Co., J. H. P. Davis 2, wo	600	1245
BLUE RIDGE—		
Moody Corp., West-Schenck 5	*	3295
FANNETT—		
Gulf, Burrel et al 2	2000	5620
GOOSE CREEK—		
Humble, Simms-Smith 74	*	6967
PIERCE JUNCTION—		
Shaw et al, Fitzsimmons E-3	1400	4430
Abercrombie & Harrison, Ritter 3	1600	4650
RACCOON BEND—		
Humble, E. B. Wilson 2	*	1200
SOUTH LIBERTY—		
Sun Oil Co., Mitchell 32	1100	1040

SOUTHWEST TEXAS

SALT FLAT—		
Atlantic, Davis 2-A	100	2768
Long & Witherspoon, Walker Bros 1	*	2776
Humble, Mary B. Johnson 1	100	2680
Wm. Smith 3	100	2675
Lutex Oil Co., Davis 5	65	2743
Golden West Oil Co., Wilson 6	60	2740
Shell, Wm. Smith 5, wo	45	2688
WEBB COUNTY—		
Foster-Barnsley, de la Garza 4, Carolina-Tex	¶50	2072
Magnolia, Benavides, Cole field	¶50	2398
The Texas Co., Bruni 1-B, Aviator pool	*	2500
DUVAL COUNTY—		
Magnolia, Hahl B-3, Schoolfield-OByrne pool	25	2333

WEST TEXAS

HOWARD COUNTY—		
Amerada Pet. Corp. & Rycade Oil Corp., Roberts 2	750	2550
Roberts 6	1440	2969
American-Maracaibo Co., Settles 2-A	735	2317
Cosden & Co., Inc., Roberts 2-D	240	3040
Group One Oil Corp. & Marland, Eason 1	150	2260
Magnolia Pet. Co., Roberts 16	20	2582
Marland Prod. Co., H. R. Clay 6	290	1822
Mid-West Explo. Co., H. R. Clay 1-C	140	1837
Sun Oil Co., Settles 5	1200	2973
JONES COUNTY—		
Phillips Pet. Co., Campbell 1	50	2547
Pomroy 2	50	2447
PECOS COUNTY—		
Mid-Kansas-Transcontinental, Yates 12-C	20,000	1345
REAGAN COUNTY—		
Big Lake Oil Co., University 153	60	3131
University 158	350	2921
WINKLER COUNTY—		
Amerada Pet. Corp., Daugherty 2	725	3120
Gulf Prod. Co., G. W. O'Brien 2	*	3093
G. W. O'Brien 3	*	3105
Humble O&R Co., Hendrick 3-C, Lse. 2	18,000	2979
Marland Prod. Co., Tobe Morton 1	1920	2993
Prairie O&G Co., Tobe Morton 1	*	3112
Shell Pet. Corp.-Danciger O&R Co., Daugherty 2	175	3208
Southern Crude-R. A. Westbrook, Hendrick 4-D-T-88	10,000	2932
Hendrick 3-L-T-88	200	3036
Hendrick 2-O-T-88	2400	2825
Hendrick 6-T-T-88	950	2840

TEXAS PANHANDLE

GRAY COUNTY—		
McIlroy Oil Co. et al, Bull 2	25	2799
Phillips Pet. Co., Johns 4	240	3210
Bob Olsen 1	*	4020
Skelly Oil Co., G. H. Saunders 4	50	2817
Jackson-North 1	140	3064
The Texas Co., G. H. Saunders 8	130	2755
G. H. Saunders 9	¶-540	2682
HUTCHINSON COUNTY—		
Phillips Pet. Co., Sanford-Pool 2	30	3159
MOORE COUNTY—		
Devonian Oil Co., Sneed 1	†	2980
WHEELER COUNTY—		
J. C. Neudigate et al, G. W. Sitter 2	¶80	2110

(Continued on page 78)

A *Marathon* Walking Beam

THERE really isn't so very much to say about a DREADNAUGHT Steel Walking Beam. It is absolutely rigid, there isn't anything to wear out, and the top is free for the use of a counterweight.

Dreadnaught Products

Wood has of course been the material commonly used for walking beams, but wood is now obsolete. It soon rots out, and long leaf yellow pine of suitable size is hard to find.

Steel is the thing. Every DREADNAUGHT is made for a walking beam Marathon and no wood beam can hope to compete in any way. DREADNAUGHT BEAMS are not to be confused with the more or less flimsy devices which whip and vibrate under heavy loads, and which cannot be properly counterbalanced for pumping.

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Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

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Donovan Boiler Works
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Rossendale-Reddaway Company
"Camel Hair" Beltings, Belt Clamps.

Engineering Crews
for the installation of Pumping Powers and related equipment.

CENTRAL WEST TEXAS

BROWN COUNTY—		
Britt & Kinnard, Bull 1	*	1403
Buffington & Smith, Moore 1	*	1500
Evans et al, Norton 1	*	1001
McClung et al, Smith 1	30	1668
Paramount Oil Roy. Inc., Mayes 2	10	648
Root et al, Robertson 1	*	1402
Syndicate Oil Co., Curry 4	25	1128
Young Bros.-Alexander & Wheatley Pet. Co., Armstrong 8	*	1435
Hickman 20	50	1257
CALLAHAN COUNTY—		
Moutray Oil Co., Hatchett 13	25	362
Reiter-Foster Oil Corp., Hatchett 18	15	351
The Texas Co., Hatchett 18	*	376
COLEMAN COUNTY—		
Donaldson & Miller, Burson 1	*	1520
Forster Bros. et al, Sharp 1	¶1¾	1143
Forster & Mid-Sun Oil Corp., Haas 1	70	1499
Herbert Oil Co.-McDonald-Campbell, Weaver 1	300	1827
T. P. Coal & Oil Co., Gay 1	¶1½ -30	1367
EASTLAND COUNTY—		
Dale O&R Co., Fox 14	*	1655
Jake Hammon, Jr., et al, Poteet 14	*	1560
Harrell Oil Co., Holcomb 1	*	1613
Hickok Prod. & Dev. Co., Amis 2	80	3378
Root et al, Hazel 2	550	3461
Teatsorth et al, Rosenquest 1	15	1464
McCULLOCH COUNTY—		
McLean & Jamison, West 2	*	1003
PALO PINTO COUNTY—		
Gordon & Gholson, McDonald 2	*	4870
T. G. Shaw et al, Gilbert 2	*	3975
SHACKELFORD COUNTY—		
Cranfill-Reynolds, Inc., Diller 1	*	1110
Earl & Dulls, Matthews 4	†	770
Roeser-Pendleton-Marland, Cook 87-A (Sec. 60)	*	1434
Cook 34-A, (Sec. 61)	50	1220
Cook 6-A, (Sec. 83)	75	1408
Cook 7-A, (Sec. 83)	15	1360
Tannehill et al, Matthews 11, (Sec. 58)	4	1002
STEPHENS COUNTY—		
Cranfill-Reynolds, Inc., Morris 1	*	2152
Stripling et al, Redwine 1	25	1933

NORTH TEXAS

ARCHER COUNTY—		
Archer Drilling Co., Roberts 1	*	1603
C. W. Clark & The Texas Co., Watts 1	*	1452
County Line Oil Co., Cernosek 1	*	1441
H. Donohoo et al, Andrews 4	†	490
Gose & Waggoner, Inman 1	*	725
F. C. Grebin et al, Henning 2	65	1439
T. F. Hunter et al, Hasson 1	*	1636
COOKE COUNTY—		
Bradwell Oil Co., Dennis 2	*	1600
W. L. Griffie et al, Wheelock 2	*	1860
ELECTRA—		
J. E. Keller et al, Waggoner 3	2	1292
MONTAGUE COUNTY—		
Pure Oil Co., Maddox 7-D	40	848
K-M-A AND IOWA PARK—		
John W. Caldwell et al, K. & K. 8	8	221
K. & K. 9	*	245
K. & K. 10	*	220
Coleman & Coppock, K. & K. 20	60	1497
Humble O&R Co., W. H. Taylor 10	200	1487
W. H. Taylor 11	200	1488
Wigley 1	*	1880
Producers Drlg. Co., Allen-Kemp 1	40	1645
United Producers Co., Allen-Kemp 3	35	1496
Fred Whitmeyer et al, D. E. Hooks 1	*	861
WILBARGER COUNTY—		
American Ref. Properties, Waggoner 1	*	2435
Fain-McGaha Oil Corp., Waggoner 2, dd	40	1934
Lewis Prod. Co., Waggoner 3	170	2410
Waggoner 6	300	2416
Phillips Pet. Co., Waggoner 5-MM	25	2330
Robertson et al, Waggoner 2-F	80	1892
Shaw Oil Co., Waggoner 2-E	100	2404
The Texas Co., Waggoner 7-C	45	2435
Waggoner Ref. Co., Waggoner 2-K	95	2406
YOUNG COUNTY—		
Holbrook & Woods, Watson 5-A	*	722
Pennell Oil Co., et al, Drumm 2	*	572
Williams et al, Bagley 1	5	630
Wise & Jackson, Calvin 4	5	654
Wootten & Reed, Drumm 1	*	593

Oil Pays Government Big Royalty Profits

Washington, D. C.—The Federal Government is deriving a greater return from oil than from all other sources of income from public lands, according to figures just compiled by the Interior Department.

The revenue of the government from this source in 1928 was $4,280,000, while about $330,000 was derived from mineral leases, or less than 10 per cent. of the returns from oil. The sales of public lands which, for generations yielded handsome returns, last year were but about half as great as that from oil leases alone, with a revenue of but $2,125,000.

The expenses incurred in conducting the business of the General Land Office for the calendar year ending December 31, 1928, including the Washington office, the district land offices and the field service and surveying service, amounted to $2,218,013.37. These figures show an excess of the receipts over the cost of operations of $4,517,440.37. The Land Office remains one of the few bureaus of the government which yields a profit.

For the calendar year ending December 31, 1927, the total receipts were $7,262,216.37, divided under the same two heads of $4,955,453.70 under the leasing acts, of which $4,707,402.01 was derived from oil and gas leases, and $2,256,823.31 from land and timber sales, etc., there being an excess of receipts over expenditures of $5,005,393.06. The expenses for 1927 were $2,256,823.31.

It will be observed that the receipts for 1928 are less than those for 1927, but this was caused largely by the low price of oil and a reduction in the production of oil. It will also be observed that the expenses were reduced by several thousand dollars in 1928 under the expenses of 1927.

Plan Deep Drilling in Los Angeles Basin Area

Los Angeles.—Four fields lying along the Newport-Beverly fault, that almost straight line running across the Los Angeles Basin, are due for deeper exploration after Long Beach and Santa Fe Springs are no longer critical areas. These fields are Inglewood, Huntington Beach, Rosecrans and Dominguez. Already deep wells have been drilled in three of these four fields, but as the term "deep" now goes, there is still a chance that lower production is possible. A deeper sand was found more than two years ago in the Inglewood field, but no further drilling has occurred. The virgin sand was found only a few hundred feet below the point at which several wells were producing. There is a possibility of a still deeper producing formation. Several wells in the Rosecrans field have been deepened with remarkable results and as the shallower wells decline, deeper drilling probably will result. This field is not as free from water as some of the areas producing heavier oil, but the quality of the oil offsets this factor. The Dominguez field is closely held by the major companies and there is little inclination to inaugurate a deepening campaign. Like the Rosecrans field, Dominguez is bothered with water in the upper sands. Several wells have been deepened a few hundred feet, but the increase in production has not been material. Huntington Beach already has had one re-development campaign, but a spirit of unrest has prevailed since the discovery of deeper zones at Long Beach and Santa Fe Springs. The townlot area is looked upon with favor and a few tests are being planned.

Geo. Miller of 101 Fame Killed in Motor Mishap

Tulsa.—George Miller, one of the owners of the 101 Ranch near Ponca City, was killed near there early February 2, when his automobile overturned. He had been to Ponca City and had visited with Lew H. Wentz during the evening.

While the Miller family was best known for its famous ranch and wild west show, the family had for many years been connected with the oil industry through several ventures. The Miller brothers were associated with E. W. Marland, when he laid the foundation for what is now the Marland Oil Company. Later they were instrumental in the drilling of many producing oil wells and wildcat ventures.

Less than a year ago, Joe Miller, elder of the three brothers, was killed by monoxide gas while working on his automobile at the ranch. The death of George Miller, leaves Zack Miller as the only remaining member of the trio, which has gained fame in farming, the show business and many other endeavors.

California's Organization To Change Name

Los Angeles.—After functioning for 18 years under its present name, and for the first three years of its existence under the banner of the Chamber of Mines, the Chamber of Mines and Oil, of Los Angeles, is going to change its name. In the near future it will become known as the California Oil and Gas Association.

In announcing the new plan, the chamber's department of public information points out that for the past eight or 10 years the oil and gas business has forged to the forefront by leaps and bounds, while mining, because of market depression and unfavorable production conditions in most districts, has become of lesser importance in the chamber's scope of activities.

The Chamber of Mines was organized in Los Angeles in 1907, to foster and advance mining in the Southwest. Three years later, because of the rapid development which the oil industry was enjoying in this state, it was decided that the name of the organization should be changed to include petroleum, so thereafter it became known as the Chamber of Mines and Oil.

Great Falls, Mont.—There will be no further development in the Kevin-Sunburst field this winter, the severe cold and extremely deep snow having put a stop to all operations.

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountin States:

	Week ending Feb. 2	Prev. ious Week	Total This Month	Total This Year	This Week Last Yr.	This Month 1928	T'tl to Date 1928	1928 Year Total
Arkansas	3	6	3	17	3	3	14	331
California	39	33	39	139	29	29	117	1,207
Louisiana	20	...	20	69	10	10	60	680
Kansas	17	38	17	115	16	16	102	1,032
Oklahoma	72	93	72	343	48	48	247	3,744
Texas	233	165	233	828	96	96	518	8,297
Total	384	375	384	1,511	202	202	1,058	15,291

ARKANSAS

UNION COUNTY—Marine Oil Co., Sample 2, 300 ft s and 300 ft e of nw c ne nw, Section 7-17-13. Ohio Oil Co., W. N. Raulston 1, 330 ft n and 330 ft w of se c ne se, Section 12-17-14. O. W. Estes, Gregory 1, 225 ft s and 225 ft w of ne c sw se, Section 15-17-14.

OKLAHOMA

CARTER COUNTY—Max Westheimer et al, Cox 1, nw, 25-1s-3w. Magnolia, Pollock 1, ne, 8-1s-3w. Humble, Hitchcock, se sw ne ne, 12-4s-3e.

COTTON COUNTY—Razor & Akins, McComb 1, sw nw ne sw, 35-1s-10w.

CREEK COUNTY—H. U. Bartlett, Berryhill 1, cwl nw nw, 1-17-11e. Tidal Osage Oil Co., Lee 2, ne nw ne, 13-18-11e (OWDD). Carter & Sheery, Harmon 1, sw se ne, 28-19-9e. A. A. Bailey et al, Williams 1a, se nw ne, 30-19-8e. Evans Brothers, Evans 1, (OWDD) nw se, 31-19-9e.

GARVIN COUNTY—Texas Pacific Coal & Oil Co., Derdyn 4, ne sw se, 8-1n-3w. Magnolia, Pearce 1, ne sw nw, 14-1n-3w.

HUGHES COUNTY—Independent, Jackson 1, c nw se, 11-7-8e.

KAY COUNTY—Marland, North 1, Lease No. 2, (OWDD), sw, 6-26-1w. Ingram & Wilson, School Land 1, c ne ne, 36-25-1w.

KIOWA COUNTY—Russell & Sloan, Jones 1, nw ne nw, 17-5n-14w. Thomas Medlin, Prough 1, ne sw, 18-6n-16w, (OWDD). Malernee & Ketch, School 1, sw nw, 16-6n-16w. J. R. Travis, Hobbs 1a, se sw nw sw, 7-6n-16w.

LOGAN COUNTY—Shell, McCully 6, ne sw se, 30-19-4w. Marland, Gragg 2, nw sw ne, 16-18-4w.

MARSHALL COUNTY—George Bilbo et al, Johnson 1, ne se nw, 14-5s-5e.

MUSKOGEE COUNTY—E. B. Gerge et al, Caser 1, cwl sw sw, 13-14-16e. E. A. Hutchinson, Mason 4, cwl ne ne, 31-15-15e. C. O. Buckles, Barnett 4 (OWDD), c ne se, 8-15-15e.

OKFUSKEE COUNTY — Josey Oil Co., Fields 3, sw nw nw, 33-12-11e (OWDD). Abbott et al, Taylor 1, ne nw, 18-12-11e.

OKMULGEE COUNTY—Moffett & Buckles, Grayson 2, cnl nw se, 16-11-12e; Moffett et al, Holm 3 (owd), cel nw ne, 7-11-12e; H. H. Diamond Oil Co., Jones 1a, se ne, 28-13-11e; J. W. Wainemiller, Hawkins 1a, se se, 21-14-11e.

OSAGE COUNTY—The Texas Co., No. 6, nw sw se, 30-25-8e; Winona Oil Co., No. 11, cwl sw, 25-24-9e (owd); Mid-Co. No. 1, se ne, 17-22-10e; Oklahoma Nat. Gas, No. 1674, sw nw, 13-21-11e; Mid-Co. No. 1, ne se sw, 15-20-10e; Oklahoma Power & Water Co., No. 114, ne nw nw, 9-20-10e.

PAWNEE COUNTY—Henrico Oil Co., Cotton 4, sw nw ne, 6-20-8e; Roy Sears et al, Wiggs 1a, ne nw nw, 30-20-9e; Edwards et al, Dyers 1, sw nw ne, 31-21-9e.

PONTOTOC COUNTY—Texas Pacific Coal & Oil Co., Hutchins 4, ne sw se, 19-5-8e; Westheimer & Daube, Wade 10, nw sw se, 19-5-8e; Wilcox O. & G. Co., Haney 1, nw se nw, 23-4n-7e.

POTTAWATOMIE COUNTY—Sinclair, Colvin 2, ne se sw, 7-8-5e; Twin State Colvin 3, se ne sw, 7-8-5e; Wilcox O. & G., Smith 3, ne nw se, 8-8-5e; Mid-Continent, Shelton 3, sw ne ne, 18-8-5e; W. B. Piue, Linger 2, nw sw ne, 18-8-5e; Marland and Shell, Everetts 2, se nw sw, 18-8-5e; Marland, Smith 1, sw ne, 20-8-5e; Westheimer & Daube, Garrett 2, se sw, 23-7-4e; Blackwell O. & G., Cherry 2, ne nw ne, 25-7-4e; Magnolia, Cherry 5, nw sw ne, 26-7-4e.

SEMINOLE COUNTY—Mid-Continent, Nevins 4, sw se se, 32-10-6e; Gypsy, Mosar 4, sw se ne, 1-8-5e; Magnolia, Fee 2, nw ne, 11-8-5e; Gypsy, Barkus 7, ne se sw, 6-8-6e.. Gypsy, Hardy 5, nw se nw, 7-8-6e; Gypsy, Hardy 6, ne se nw, 7-8-6e; Gypsy, Barkus 3, ne sw nw, 7-8-6e; Sinclair, Hardy 4, sw ne sw, 7-8-6e; Pure, Brinson 4, ne nw sw, 24-7-6e; Mid-Continent, Smith 4, se nw ne, 5-7-7e; Empire O. & R., Fish 1, se ne, 19-7-8e; Magnolia, Harjo 1, ne se, 34-6-7e; Cal Cul Oil Co. and Sunray Oil Corp., Joanna 2, sw nw sw, 24-5-7e; Sunray Oil Corp., Amos 2 (twin) ne se sw, 7-5-8e; Mid-Continent, Fleet 15 (twin) nw sw se, 7-8-5e; Mid-Continent, Fleet 16 (twin), nw se, 7-8-5e; Louisiana O. & R., Reed 5 (twin), se ne ne, 18-5-8e.

STEPHENS COUNTY—Harry Muse et al, Ratliff 1, se nw ne, 14-1s-4w; Pace et al, Medley 1, sw nw ne, 2-2s-8w; Pace et al, McMasters 1, nw se ne, 13-2s-8w.

KANSAS

BUTLER COUNTY—Empire O. & R., Sharrock 7, se ne sw, 27-27-5e; Sharrock 8, nw sw se, 27-27-5e; Hutchinson "B" 6, ne nw ne, 27-27-5e.

COFFEE COUNTY—Union Gas Co. et al, Read 1, sw nw, 9-22-14e.

COWLEY COUNTY—Trees Oil Co., Mauser 1, sw nw ne, 12-32-6e.

GREENWOOD COUNTY—Amerada, Luthi 6, sw ne sw, 29-22-13e.

HARVEY COUNTY—Roth, Faurot et al, Nebergale 1, nw, 26-22-1w.

RUSH COUNTY—Danciger et al, Schuermann 2, nw, 27-17-17w.

RUSSELL COUNTY—Mid-West Explo. Co., Dortland 22, nw se sw, 5-14-15w. Gypsy and Marland, Obershane 1, sw nw, 28-13-15w.

SEDGEWICK COUNTY — Bason et al, Heskins 1, nw ne se, 2-27-2e. Streeter & Stearns, Woodman 1, cnl sw nw ne, 7-26-1e. Bu-Vi-Bar, Roll 1, nw ne, 7-26-1e. Bu-Vi-Bar et al, Bright "B" 1, sw se nw nw, 6-26-1e. Bu-Vi-Bar, Bright "A" 1, sw nw nw nw, 6-26-1e; Nagle 1, ne sw, 19-25-1e.

WOODSON COUNTY — Fisher & Lauck, Mabe 1, ne nw ne, 31-24-15e.

CALIFORNIA

BELRIDGE—The Ohio Oil Co., No. 24, 30-28-21.

FRESNO COUNTY—Milham Explo. Co., Kennedy 1, 28-21-17.

HUNTINGTON BEACH—V. R. G. Wilbur, Mosier 1, 2-6-11.

IMPERIAL COUNTY—Imperial Valley Pet. Co., No. 1, 33-11-10.

KERN COUNTY—Milham Explo. Co., Harris 1, 8-28-23. Dollar Oil Co., Haberken 1, 18-31-22. Pan American Pet. Co., No. 30, 22-28-27.

KINGS COUNTY—The Ohio Oil Co., No. 1, 35-24-19.

LAWNDALE—George F. Getty, Inc., "L" 1, 17-3-14. J. E. O'Donnell, No. 70, 21-3-14. Petroleum Securities Co., Brown 1, 21-3-14; Brown 2, 21-3-14. Sovereign Oil Corp., No. 5, 21-3-14. Jimco Oil Co., Dale 1, 21-3-14. Thomas B. Leddy, No. 1, 21-3-14. Smith Dev. Co., No. 2, 20-3-14; No. 3, 20-3-14. J. C. Cummings, Holcomb 1, 21-3-14. J. W. Leonard and L. Restrepo, No. 1, 21-3-14. Shell Oil Co., Peck 1, 20-3-14. The Elmer Oil Co., Elmer 1, 16-3-14.

LONG BEACH—Western O. and R. Co., and Olympic Ref. Co., No. 15, 19-4-12. The Pet. Co., Wellman 2, 24-4-13. Shell Oil Co., Nesa 12, 29-4-12. Dabney-Johnston Oil Corp., No. 32, 24-4-13.

MIDWAY—John Knudsen, Eddie Schmidt 1, 12-32-22.

MT. POSO—R. T. Dennis, No. 4, 32-26-28. Noble H. Wible, Wible 1, 32-26-28.

ROSECRANS—Burlingham Pet. Corp., No. 1, 17-3-13.

SANTA FE SPRINGS—Earl Moore, No. 1, 5-3-11. The Texas Co., Weaver 7, 6-3-11. Bandinni Pet. Co., Off 12, 5-3-11; Off 13, 5-3-11; Off 14, 5-3-11. General Pet. Corp., Santa Fe 168-D, 5-3-11. Third Twin Bell Syn., No. 1, 6-3-11.

SESPE—Frank Oil Co., Mo. 1, 35-4-20. Metro Grande Oil Co., 1-4-20; No. 11, 1-4-20.

VENTURA—Pacific Western Oil Co., S. P. Willett 1, 28-3-23.

TEXAS

ARCHER COUNTY—Reno Oil Co., Wichita Falls, Wilmut 9, S 4, SP Ry. sur, 150 ft from e and 450 ft from s line. Waggoner & Gose, Wichita Falls, Inmon 1, S. McKimbor sur, 150 ft from s and w lines. Madden & Hunt, Olney, Richardson 16, S. Anderson sur, 600 ft from w and 560 ft from s line. Texas Co., Wichita Falls, Parkey 1, S1, Amer. Trib. sur, 1320 ft from e and 2280 ft from n line. Freeman & Grebin, Wichita Falls, Hennig 3, G. P. Meade sur, 150 ft from s and e lines. F. P. Rose, Wichita Falls, Garvey 4A, 1856 TE&L sur, 150 ft from e and 750 ft from s line. Magnolia Pet. Co., Dallas, Kunkle 1, G. W. Steel sur, 150 ft s of center of n line. Llewellyn 1, J. Llewellyn sur, 150 ft from s and e lines. Archer Drilling Co., Wichita Falls, Roberts 1, B 100, American Trib. sur, 150 ft from n and 660 ft from e line. Humble & Rose, Wichita Falls, Abercrombie 1, J. W. Harris sur, 150 ft from n and 1581 ft from e line. Akin, Rayzor & Rose, Wichita Falls, Finley 1, A. Nail sur, 150 ft from n and 877 ft from e line. American Ref. Properties, Wichita Falls, Benson 2, 1808 TE&L sur, 300 ft e of No. 1. Panhandle Ref. Co., Wichita Falls, Prideaux 13C, A. Rohus sur, 150 ft from s and w lines. Underwood Drilling Co., Wichita Falls, Wilson 3, S 12, H&TC sur, 1140 ft from n and 1150 ft from e line. Tidal Oil Co., Fort Worth, Waggoner 1, J. W. Harris sur, 150 ft from n and 531 ft from e line.

ANGELINA COUNTY—L. F. Troxel, Lufkin, Collmorgan 1, V. Michelli sur, north central. Angelina Gas Co., Lufkin, McKinney 1, B. Mitchell sur, 321 ft w of center of e line.

ANDERSON COUNTY—Humble, Houston, Jones B1, D. Roberts sur, 150 ft from s and e lines.

AUSTIN COUNTY—Humble, Houston, Urban 3, W. C. White sur, 1143 ft from ne and 340 ft from se line.

BROWN COUNTY—T. C. Nystil, Brownwood, Guyer 1, S 22, HT&B sur, 1470 ft from e and 1170 ft from n line. American-Maraca bo Co., Fort Worth, Cross 4, No. 624 J. Kinney sur, 150 ft from n and e lines. Brock, Dunn & Switzer, Brownwood, Hennigan 1, S 148, A. Bates sur, 150 ft from s and w lines. Humble, Cisco, Byler 10, S 43, T&NO sur, 361 ft e of No. 9. Herring & Anderson, Brownwood, Edmondson 1, T. Townsend sur, 150 ft from w and 450 ft from s line. Hammon & Garrett, Wichita Falls, Strange 1, No. 125 J. E. Mel-

ton sur, 673 ft from w and 150 ft from n line. Gore & Brown, Brownwood, Mayes 3, No. 609 J. M. Ross sur, 450 ft from e and 387 ft from s line. A. D. Bruce, Brownwood, Shield 5, J. C. Brown sur, 360 ft w of No. 2. Cranfill & Reynolds, Cisco, Marr 1, B 62, H. P. Tuggle sur, 170 ft from n and 420 ft from w line. Amerada, Fort Worth, Guthrie 3, A. Arroche sur, 1100 ft ne of No. 1. Texas Co., Wichita Falls, Byler 4, S 43, T&NO sur, 350 ft e of No. 3. Phillips Pet. Corp., Bartlesville, Okla., DeBusk 3, No. 648 E. Bell sur, 646 ft from s and e lines; 2, 2697 ft from e and 2658 ft from s line. Humble Oil & Ref. Co., Wichita Falls, Hodnett A-19, J. M. Harris sur, 1200 ft from w and 697 ft from s line; Hickman 29, T. Benson sur, 1030 ft from w and 200 ft from s line. Crown Oil Corp., Brownwood, Jones 10, J. C. Paige sur, 300 ft from n and 450 ft from s line.

BASTROP COUNTY—Gulf Prod. Co., Houston, Yost 2, A. Garcia sur, 300 ft e of No. 1.

CALLAHAN COUNTY — Reiter-Foster Oil Corp., Tulsa, Okla., Hatchett 18, S 24, D&D Asy. sur, 445 ft from e and 676 ft from s line. E. F. Stratton, Pioneer, Smith 2, B 71, CCSL sur, 150 ft from s and e lines. Moutray Oil Co., Abilene, Hatchett 13, S 29, D&D Asy sur, 300 ft w of No. 11. Texas Co., Fort Worth, Hatchett 18, S 29, D&D Asy sur, 750 ft from e and 150 ft from n line. Wittmer O. & G. Properties, Pittsburgh, Penna., Williams 1, No. 1 TE&L sur, 1035 ft from n and 835 ft from e line. Warren-Hayes Oil Corp., Cisco, Texas, Hearne 5B, S 129, BBB&C sur, 300 ft e of No. 2B; 6B, 450 ft from n and w lines; 7B, 450 ft from w and 750 ft from n line; 8B, 750 ft from n and w lines.

CALDWELL COUNTY—Alexander, Smith & Capps, Houston, New 1, J. Hinds, sur, 150 ft from w and 48 ft from s line. Golden West Oil Co., San Antonio, Malone 2, A. Floyd sur, 150 ft from w and 200 ft from n line. Tip De Arman, Luling, Carter 2, G. Hinds sur, 170 ft from w and 147 ft from n line. Shell, Luling, Malone 4, A. Floyd sur, 150 ft sw of center of ne line; Tiller 3, G. Hinds sur, 400 ft w of No. 1. Moses 3, A. Floyd sur, 450 ft from e and 150 ft from s line; Carter B2, G. Hinds sur, 150 ft from n and w lines; Grein 1, 5 (Guadalupe County). Gulf Prod. Co., Houston, Tiller 1, G. Hinds sur, 150 ft from n and w lines; 2, 300 ft w of No. 1; 3, 300 ft w of No. 2; 4, 450 ft from w and 150 ft from s line; 5, 300 ft e of No. 4; Wright A1, G. Hinds sur, 450 ft from s and 150 ft from w line; Allen 2, G. Hinds sur, 300 ft e of No. 1; Carter 2, G. Hinds sur, 300 ft w of No. 1; 3, 150 ft from s and w lines; 4, 300 ft e of No. 3. Wm. F. Morgan, San Antonio, Malone 1, Bruner sur, 150 ft from n and w lines. Sun Oil Co., Dallas, Malone 5, A. Floyd sur, 300 ft se of No. 3.

COOKE COUNTY—Texas Co., Fort Worth, Dennis 5, T. J. Hutchinson sur, 150 ft e of center of w line.

COLEMAN COUNTY — Harris, White & Pinkerton, Coleman, Jones 1, S 196, L. Juliene sur, nw corner. E. L. Chapman, Fort Worth, Fuller Jr. 2, No. 751 M. Martinez sur, 1950 ft from n and 755 ft from e line. Midsun Oil Corp. et al, Abilene, Haas 2, S 71, GH&H sur, 150 ft from nand 626 ft from w line. T. P. Coal & Oil Co., Ranger, Gay 2, S 630, M. Fisk sur, 450 ft from e and 150 ft from n line. S. B. Owens et al, Brownwood, Boyle 1, No. 168 A. Wickson sur, 150 ft from s and w lines.

CRANE COUNTY — Tidal Oil Co., Fort Worth, University 1, S 34, B 30, Univ. Lands sur, 330 ft from s and e lines.

CHEROKEE COUNTY—Humble, Houston, Earle & Ragsdale 4, N. Johnson sur, 384 ft from s and 1834 ft from e line.

CLAY COUNTY—R. T. Belcher, Wichita Falls, Culbertson 1, K. McKenzie sur, 150 ft from s and e lines.

CARSON COUNTY—Marland Oil Co., Ponca City, Okla., Burnett 1, S 79, B 4 I&GN sur, 440 ft from n and 1320 ft from e line.

CHAMBERS COUNTY—Yount-Lee Oil Co., Beaumont, Chambers County Agricultural Company, 2, Wm. Bloodgood sur, 50 ft from w and 500 ft from n line.

DUVAL COUNTY—Robert Driscoll, Corpus Christi, Fee 14, S 448, 2750 ft from e and 550 ft from s line. Wm. F. Morgan, San Antonio, Welder 1, S 102, S. Alexander sur, 372 ft from w and 750 ft from s line.

ERATH COUNTY—Snebold & White, Mingus, Smith 2, J. Bishop sur, 600 ft from e and 4400 from s line.

EASTLAND COUNTY—L. Teatsorth, Eastland, Rosenquest 1, S 3, B 6, ET Ry. sur, 155 ft from n and 160 from e line. T. J. Alworth, Ranger, Harbin 2, S 4, B4, H&TC sur, 500 ft from e and 800 ft from s line. Kokomo Pet. Co. & Phillips Pet. Corp., Gorman, Colline 2, S 11, B 1, H&TC sur, 990 ft from n and e lines.

FORT BEND COUNTY—Navarro Oil Co., Houston, Davis 2, B 30, B. Wickson sur, 250 ft from n and 140 ft from e line. Humble, Houston, Sugarland Ind. 5, Wm. Stafford sur, 500 ft n of No. 4.

FISHER COUNTY—Landreth Prod. Corp., Fort Worth, Cooper 1, S 115, B 1, H&TC sur, 440 ft from n and 2200 ft from w line.

GRAY COUNTY — Wetzel Oil Co., Erick, Okla., Morse 1, S 66, B 25, H&GN sur, 200 ft from e and 200 ft from s line.

GRAYSON COUNTY—B. E. Jones, Denison, Coleman-Peters 1, Wright & Rubio sur, 355 ft from n and 1038 ft from w line.

GONZALES COUNTY—Empire G & F. Co., Wichita Falls, San Marcos River Bed lands 1, W. Turner sur, 133 ft from n and 10 ft from e line river.

GARZA COUNTY—Emerald Oil Co., Winfield, Kas., Boren 4, S 136, B 5, H&GN sur, 330 ft from s and w lines.

GOLIAD COUNTY—J. E. Alexander, Goliad, Frommie 1, 10 mi n of Goliad, 450 ft from e and 200 ft from s line.

GLASSCOCK COUNTY—Hyer & Yates, Ft. Worth, Clay 3, S 155, B 29, W&NW sur, 660 ft s of No. 1.

GUADALUPE COUNTY—Shell Pet. Corp., Luling, Grein 1, A. Mansola sur, 530 ft from w and 150 ft from s line. Magnolia, Dallas, Cartier 2, H. Cottle sur, 300 ft sw of No. 1.

HOWARD COUNTY — American-Maracaibo Co., Fort Worth, Settles 4, S 6, B 32, T&P sur, 570 ft from w and 500 ft from s line; 5, 330 ft from n and 680 ft from w line; Settles 1, S 158, B 29, W&NW sur, 330 ft from n and w lines. Humble, Wichita Falls, Clay 1, S 138, B 29, W&NW sur, 990 ft from n and 330 ft from w line; 2, 330 ft from s and e lines. Moody Corp., Box 1911, Tulsa, Okla., Roberts E10, S 136, B 29, W&NW sur, 200 ft from s and 150 ft from e line. Marland Prod. Corp., Ponca City, Okla., Clay G3, S 126, B 29, W&NW sur, 250 ft from w and 786 ft from s line; Clay F3, S 138, B 29, W&NW sur, 410 ft w of No. 1; Clay A12, S 139, B 29, W&NW sur, 535 ft e of No. 10. Midwest Explo. Co., Amarillo, Clay C2, S 138, B 29, W&NW sur, 660 ft e of No. 1; C3, 660 ft e of No. 2. Magnolia, Dallas, Roberts 18, S 136, B 29, W&NW sur, 330 ft from w and 405 ft from s line. Pure Oil Co., Fort Worth, Chalk 11, S 125, B 29, W&NW sur, 660 ft n of No. 5.

HARTLEY COUNTY—Canadian River Gas Co., Amarillo, Lee Bivins A10, S 18, B 2, G&M sur, 660 ft from n and e lines.

HARDIN COUNTY — Rio Bravo Oil Co., Houston, Fee B106, S 132, BBB&C sur, 200 ft w of No. B105.

HARRIS COUNTY — Rio Bravo Oil Co., Houston, Settegast A9, J. Kopman sur, 1575 ft from n and 350 ft from e line. Woods & Bennett, Humble, Fee 2, Demmerett sur, south central part of lease.

JEFFERSON COUNTY—J. H. Sutherlin, Port Arthur, Longhorn 2, J. Douthitt sur, ne corner. Yount-Lee Oil Co., Beaumont, McFadden 50, P. Humphreys sur, 1081 ft from e and 888 ft from n line; Nona Mills 1, C. Hillebrant sur, 259 2ft from e and 5094 ft from n line. M. F. DeBoth, Beaumont, Schingles 1, B 37, J. A. Veatch sur, 40 ft from nw and 10 ft from sw line. Unity Oil Co., Beaumont, McFaddin 99, P. Humphreys sur, 805 ft from nw and 750 ft from sw line.

JIM HOGG COUNTY—E. St. Albans, Laredo, Holbein 5, No. 3 Las Animas sur, 150 ft from n and w lines. Brooklyn Oil Co., Dallas, Garza 2, S 40, B 16, 450 ft from n and e lines.

JONES COUNTY—Roeser & Pendleton, Inc., & Landreth, Albany, Grayson A4, S 13, B 19, T&P sur, 660 ft w of No. 3.

JACK COUNTY—Texas Co., Wichita Falls, Shamafelt 1, I. Hugson sur, 330 ft from n and 32 ft from e line.

KING COUNTY—Salisbury Huff, Wichita Falls, Martin 1, S 174, B F, H&TC sur, 1320 ft from n and e lines.

LIBERTY COUNTY—Sun Oil Co., Beaumont, Mitchell 38, M. G. White sur, 150 ft n of No. 26; 39, 351 ft n of No. 28; 36, 100 ft n of No. 34; 37, 150 ft n of No. 35. Texas Co., Houston, Davis 2, S. Coy sur, 400 ft from w and 2300 ft from s line. Trinity Southern Oil Co., Houston, Pickett 1, White sur, ne corner. Gulf, Houston, McLean 7, M. G. White sur, 31 ft from e and 854 ft from s line; 8, 416 ft from s and 181 ft from e line.

MONTAGUE COUNTY—Pure Oil Co., Ft. Worth, Maddox 8, J. Chambliss sur, 400 ft e of No. 7.

MILAM COUNTY — Kent-Middleton Ref. Co., Corsicana, Isaacs 1, Chahmbers & Burchard sur, nw corner. Union Prod. Co., Rockdale, Gaither 15, Chambers sur, 750 ft from n and 575 ft from w line.

PALO PINTO COUNTY—Upham & Brazos River Gas Co., Mineral Wells, Wharton 2, G. Green sur, 1500 ft se of No. 1.

PECOS COUNTY — Gulf Prod. Co., Fort Worth, Smith 15, S 22, B 194, GC&SF sur, 1361 ft w of No. 13. Mid-Kansas O. & G. Co., Tulsa, Okla., Yates 8, S 32, B 194, GC&SF sur, 3528 ft from w and 797 ft from s line.

RUNNELS COUNTY—Marland Prod. Co., Ponca City, Okla., Hennig 1, S 139, E. T. Ry. sur, 330 ft from n and e lines.

RUSK COUNTY—Magnolia, Dallas, Duran 1, J. Lollar sur, 330 ft from n and w lines.

REFUGIO COUNTY — Benedum-Trees Oil Co., Pittsburgh, Penna., Rooke 1, T. Mullen sur, 150 ft from s and e lines.

SHACKELFORD COUNTY—J. S. Yall & Bros., Mineral Wells, Arendt 1, S 597, TE&L sur, 950 ft s of nw cor and 150 ft from n line. C. C. Cady, Moran, Reynolds 1, S 594, TE&L sur, 150 ft from s and e lines. J. A. Collier, Moran, Clarke 1, S 37, Univ. Lands sur, 300 ft from n and 660 ft from w line. McBest Oil Co., Albany, Gordon 4, S 6, E. T. Ry. sur, 1640 ft from w and 150 ft from n line. Roeser & Pendleton, Inc., Albany, Cook B11, S 61, E. T. Ry. sur, 455 ft nw of No. 9. A. D. Robinson, Dallas, Blach 4, S 372, TE&L sur, 350 ft from ne and 150 ft from se line. Tannehill, Kiser & Fleming, Albany, Matthews 5, S 27, E. T. Ry. sur, 450 ft from w and 500 ft from s line. Simms Oil Co., Dallas, Lones 5, S 64, B 11, T&P sur, 950 ft from n and 190 ft from w line. Less Comstet et al, Mineral Wells, Alexander 11, S 15, LAL sur, 500 ft from w and 200 ft from s line. Roeser & Pendleton & Marland Oil Co., Ponca City, Okla., Cook A36, S 61, E. T. Ry. sur, 419 ft e of No. 30. Roeser & Pendleton & Phillips Pet. Corp., Albany, Bernstein 3, No. 532 TE&L sur, 300 ft se of No. 2. A. C. Walker, Albany, Huskey 16, 529 TE&L sur, 300 ft n of No. 13. L. B. Tannehill, Albany, Whitney 1, 803 TE&L sur, 1100 ft from n and 800 ft from e line. Fred Pool, Moran, Hill 1, S 39, Blind Asy. sur, 300 ft from s and e lines. Roeser & Pendleton & Marland Oil Co., Albany, Cook A35, S 61, E. T. Ry. sur, 415 ft n of No. 17; Cook B 12, S 61 E. T. Ry. sur, 377 ft w of No. 10. Meredith & Grant, Moran, Webb 8, S67, Univ. Lands sur, 300 ft e of No. 6; 9, 900 ft e of No. 4.

STEPHENS COUNTY—Amerada Pet. Corp., Fort Worth, Patton 3, 662 TE&L sur, 3000 ft from n and 300 ft from w line. Lone Star Gas Co., Dallas, Elliott 2, S 55, B 7, T&P sur, 1650 ft from s and 2000 ft from w line; Brooks 1, S 54, B 7, T¼&P sur, 439 ft from n and 300 ft from w line. T. G. Shaw, Fort Worth, Manning 1, S 42, B 4, T&P sur, 1440 ft from n and 400 ft from w line; Roark 1, J. E. Rodgers sur, 825 ft from n and 250 ft from e line. Clark & Hanlon, Inc., Breckenridge, Creagh 1, S 7, T&P Ry. sur, 900 ft from n and 300 ft from e line.

SCHLEICHER COUNTY—Geo. T. Allen, Abilene, Whitten 1, S 35, B LL, T. C. Ry., center.

SAN SABA COUNTY — C. L. B. Tyles, Brownwood, Winkler 1, No. 626 G. E. L. Co. sur, 200 ft from n and 450 ft fro me line.

THROCKMORTON COUNTY—Reiter-Foster Oil Corp., Tulsa, Okla., Matthews 1, B 41, Comanche Res. sur, 150 ft from s and w lines.

UPSHUR COUNTY — Amerada Pet. Corp., Fort Worth, Ault 1, McFaddin sur, 1650 ft from n and 375 ft from e line.

WICHITA COUNTY — United Prod. Co., Wichita Falls, Kemp & Blair 3, B 44, WFVL sur, 300 ft w of No. 2. Humble, Wichita Falls, Taylor 11, S 81, WVFL sur, 300 ft w of No. 8. J. H. S. Bonner et al, Wichita Falls, Cole 24, J. McCool sur, 150 ft from n and 28 ft w of No. 23. Magren & Anderson, Electra, Goetze 14, No. 2 SA&MG sur, 775 from w and 500 ft from s line. Gulf Prod. Co., Fort Worth,

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Location Marland Stocks	*Location Taubman Branches*
Winfield, Kansas	Wichita Heights, Kansas
Ponca City, Oklahoma	Tulsa, Oklahoma
Tonkawa, Oklahoma	Oklahoma City, Oklahoma
Blackwell, Oklahoma	Seminole, Oklahoma
Quay, Oklahoma	Maud, Oklahoma
Borger, Texas	Wink, Texas
McCamey, Texas	Borger, Texas
Big Springs, Texas	

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Mitchell 2, J. T. Lewis sur, 150 ft from w and 750 ft from n line. J. W. Caldwell, Wichita Falls, Kemp 7, S 26, WVFL sur. A. T. Wolfe & Son, Wichita Falls, Daume 1, SP Ry. sur, 150 ft from n and e lines. Balyeat et al, Wichita Falls, Warren 1, DL&C sur, 150 ft from n and w lines. Hammon & Garrett, Wichita Falls, Miller 2, W. R. Eeaves sur, nw corner. Humble, Wichita Falls, Taylor 12, S 81, WVFL sur, 300 ft w of No. 5; 13, 300 ftw of No. 9.

WILBARGER COUNTY — Phillips Pet. Corp., Bartlesville, Okla., Waggoner 21, S 42, B 4, H&TC sur, 2013 ft from s and 1100 ft from e line. Staley, Wynne & Co., Wichita Falls, Waggoner L1, S 39, B 17, H&TC sur, 150 ft from n and 660 ft from e line; Waggoner 5, S 32, B 4, H&T Csur; Waggoner J1, S 65, B 14, H&TC sur, 205 from n and e lines. Prairie O. & G. Co., Ranger, Waggoner S 45, B 4, H&TC sur, 551 ft from nw and 467 ft from sw line; Waggoner 8, S 43, B 4, H&TC sur, 546 ft from sw and 1238 ft from se line. Phillips Pet. Corp., Bartlesville, Okla., Waggoner 4, S 45, B 4, H&TC sur, 300 ft from n and 200 ft from w line. Baker & Camp, Wichita Falls, Waggoner 11, T. D. Furnell sur, 155 ft from n and 300 ft from w line. Jas. E. McKanna, Wichita Falls Waggoner B4, S 32, B 4, H&TC sur, 150 ft from n and e lines; B5, 205 ft from s and w lines. Fain-McGaha Oil Cor., Wichita Falls, Waggoner 3, S 39, MEP&P sur, 150 ft from e and 450 ft from n line; Waggoner 3, S 18, B 4, H&TC sur, 150 ft from n and 450 ft from w line; 4, 150 ft from w and 450 ft from n line. Cosden & Co., Inc., Fort Worth, Waggoner 34B, S 26, B 4, H&TC sur, 205 ft from n and e lines. Waggoner Ref. Co., Inc., Electra, Waggoner 4, S 31, B 4, H&TC sur, 356 ft nw of No. 3; 5, 2058 ft from n and e lines.; W. T. Waggoner 1, S 32, B 4, H&TC sur, 150 ft nw of center of se line. E. P. Waggoner, Fort Worth, Waggoner 1, S 18, B 4, H&TC sur, 150 ft from n and e lines. Golding & Cochran, Wichita Falls, Waggoner 3, S 32, B 4, H&TC sur, 300 ft e of No. 2.

WINKLER COUNTY—Texon Oil & Land Co., Big Lake, Hendricks 6B, S 45, B 36, PSL sur. 330 ft from e and 1650 ft from s line. Republic Prod. Co., San Angelo, Hendrick 13, S 45, B 26, 1650 ft from s and 330 ft from w line. Southern Crude Oil Pur. Co. & Dixie Oil Co., Fort Worth, Hendrick Q2, S 27, B 26, 440 ft from n and 330 ft from w line; Hendrick 1, S 21, B 26, 330 ft from e and 440 ft from s line; Hendrick J3, S 9, B 12, 330 ft from e and 2200 ft from s line; J4, 440 ft from n and 1320 ft from e line; J5, 330 ft from e and 1320 ft from s line. Gulf, Fort Worth, Cowden 4, S 3, B 12, 815 ft s of No. 3. Scarborough 1, S 1, B C22, 330 ft from s and w lines. Humble, Wichita Falls, Hendrick C6, S 10, B B12, 830 ft s of No. 5; C7, 660 ft e of No. 2; C 8, 440 ft from n and 990 ft from e line. T. G. Hendrick B8, S 39, B 26, 990 ft e of No. 3.

WEBB COUNTY—O. W. Killam, Laredo, Bruni No. 1, B 5, M. Arispe sur, 405 ft from se and 1550 ft from sw line; Cuellar 10, J. M. Pereda (Zapata) sur, 520 ft from sw and 405 ft from se line. Magnolia, Dallas, Valdez 1, No. 754 sur, 150 ft from s and e lines. O. W. Killam, Laredo, Bruni 33, B 64, Albercas sur, 1435 ft from n and 555 ft from e line; Bruni 5, S 8, M. Arispe sur, 1530 ft from nw and 355 ft from ne line.

WASHINGTON COUNTY—Sun Oil Co., Dallas, Marcus 1, J. F. Perry sur, 150 ft nw of center of se line.

WARD COUNTY—J. H. L. Oil Co., Midland, Hayzlett 1, S 17, B 5, H&TC sur, 150 ft from n and w lines.

WHEELER COUNTY—Texas Co., Wichita Falls, Gordon 1, S 91, B 17, H&GN sur, 405 ft from e and 330 ft from s line. J. B. Clark, Shamrock, Purcell 1A, S 51, B 17, H&GN sur, 660 ft from s and e lines.

WHARTON COUNTY—Gulf Prod. Co., Houston, Chase 18, S. F. Austin sur, 300 ft nw of No. 17. Texas Co., Houston, Chase 9, S. F. Austin sur.

WALLER COUNTY—Texas Co., Houston, Young 1, Irons & Groce sur, 1320 ft from n and w lines.

YOUNG COUNTY—L. G. Bradstreet Co., Fort Worth, Snider 2, R. Wilson sur, 750 ft from n and 510 ft from w line. Stivers-Streeter Co., Fort Worth, Vardy 1, 350 TE&L sur, 2290 ft from e and 1400 ft from s line. T. G. Shaw, Fort Worth, Roark 1, J. E. Rodgers sur, 825 ft from n and 250 ft from e line. Barkley & Meadows, Wichita Falls, Stewart 22, D. Dawson sur, 25 ft from w and 225 ft from s line. Wooten & Reed, Graham, Drum 1, S. Tynes sur, 2188 ft from n and 708 ft from w line. Hinson & Tidwell, Graham, I. Grantham 3, E. J. Ribble sur. sw corner. Riggs & Oliphant, Graham, Prideaux 1, S. Tynes sur, 150 ft from s and w lines. C. A. Pennell et al, Loving, Drum 1, S. Tynes sur, 150 ft from s and e lines. Holbrook & Woods, Wichita Falls, Watson 5, S 22 Y. C. S. L. sur, 300 ft s of No. 2. L. T. Burns, Wichita Falls, Sullivan 1, 1918 TE&L sur, 750 ft from n and 1440 ft from e line.

ZAPATA COUNTY—O. W. Killam, Laredo, Cuellar 11, J. M. Pereda sur, No. 10, 520 ft from sw and 405 ft from se line. C. L. McCaslin, Mirando City, Hinnant 1, S 74 se¼ of sw¼, 250 ft from w and 630 ft from s line.

LOUISIANA

BIENVILLE PARISH — W. P. Wallace, Shreveport, Sate No. 1, (Amended Permit), 16-16n-10w, 2958 ft s and 800 ft w of ne c.

CAMERON PARISH—Calcasieu Oil Co., Inc., Magnolia Pet. Co. & Union Sulphur Co., Houston, Texas, Doiron 5, 37-12s-10w, 3573 ft w and 1415 ft s of se co Sec. 13-12s-10w in Sec 37-12s-10w.

JEFFERSON DAVIS PARISH — Vacuum Oil Co., Earl et al No. 1, 15-9s-4w, 300 ft n and 300 ft w of se c ne.

LA SALLE PARISH—H. L. Hunt, Inc., El Dorado, Ark., Urania Lbr. Co., A-5, 2-9n-1e, 660 fe s and 660 ft w of center.

LINCOLN PARISH—V. E. Shaw et al, Bernice, J. P. Voss 1, 1-20n-3w, 720 ft n and 400 ft w of se c.

MOREHOUSE PARISH—J. S. Herkness, Bastrop, Bowles 5, 17-20n-5e, 760 ft n and 660 ft e of sw c se; Bowles 6, 17-20n-5e, 660 ft n and 660 ft w of se c sw. Natural Gas Prod. Co. of La., Bastrop, Crossett 23, 26-21n-4e, 1320 ft w and 2 ft n of se c. Ouachita Natl. Gas Co., Monroe, Sandige-Patton 1, 15-20n-4e, 3524 ft e and 58 ft s of ne c nw nw.

OUACHITA PARISH—Maury Drilling Co., Monroe, McEwen 5, 29-19n-4e, 660 ft w and 3300 ft n of se c. The Palmer Corp. of La., Shreveport, La., Fee 6, 24-19n-4e, 4567 ft w and 3300 ft s of ne c. Peerless Carbon Co., Pittsburgh, Pa., Moore 4, 26-20n-4e, 907.5 ft w and 181.5 ft n of c Secs 49-26-25. United Carbon Co., Monroe, Spade 1, 32-19n-4e, 660 ft s and 660 ft w of center; Spade 2, 36-19n-3e, 1980 ft n and 660 ft e of sw ce. United Oil & Natl. Gas Prod. Co., Monro, Cole No. 2, 26-20n-4e, 660 ft s and 594 ft e of center.

RICHLAND PARISH — M. L. Meredith, Agent, Monroe, Kate Humble 1, 35-16n-6e, 680 fe e and 2033 ft s of nw co. Richland Operating Co., Monrot, S. R. Humble 1, 30-16n-7e, 1980 ft e and 1980 ft s of nw c.

TERREBONNE PARISH—The Texas Co., Shreveport, Dog Lake Bayou A-1, 6-22s-16e, 1550 ft w and 300 ft s of ne c of Sec.; Four Isla Bayou B-1, 23-21s-16e, 1725 ft s and 925 ft w of ne c of Sec.

UNION PARISH—Industrial Gas Co., Bastrop, Vester Cook 1, 12-20n-3e, 660 ft n and 660 ft e of sw c. United Carbon Co., Monroe, L. Reed Heirs 1, 12-20n-3e, 660 ft n and 660 ft w of se c sw.

The Ideco Club, employees' organization of the International Derrick & Equipment Company, recently held an annual election, and the following were named: J. L. Hamilton, president; W. B. Tobin, vice-president, Pacific Coast district; L. L. Powell, vice-president, Mid-Continent district; Clifford Athy, vice-president representing Ohio; C. E. Firestone, Sr., secretary; J. T. Dunlap, assistant secretary; C. G. Runkle, treasurer; and G. P. Dysart, assistant treasurer.

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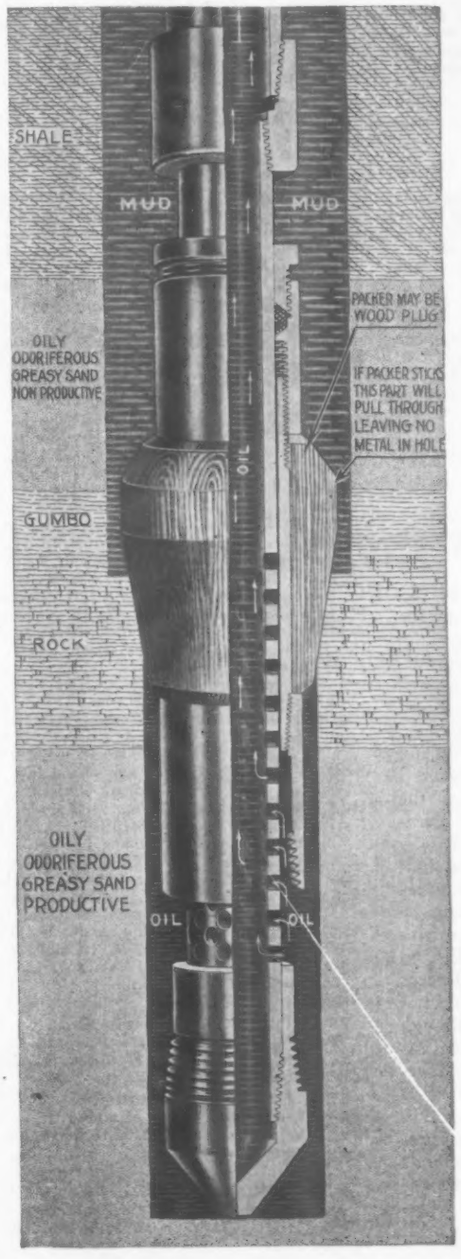
FLOW TESTER
Leaves No Room for Doubt



The Edwards Improved Flow Tester is protected by United States Patents No. 1,514,585, dated November 4, 1924. Other patents pending.

This is the Tester That Has—

1 Means for producing a vacuum in the sands being tested.

This is the Tester That Has—

2 Means for agitating the fluid against the face of the formation being tested.

This is the Tester That—

3 You can rotate during entire test. You want a sample and not a stuck pipe.

This is the Tester—

4 With the combination Packer that will make a test in rotten formation.

This is the Tester That Has—

5 Perforated pipe covered going in well. You want a test and not a choke off.

This is the Tester That Has—

6 No valves to stick in the flow Tester. You know when the Flow Tester opens.

This is the Tester That Has—

7 Metal parts of the Flow Tester no larger than the Drill Stem. You can drill smaller holes and save money.

This is the Tester That Will—

8 Test in any "Rat Hole" 3⅛ inches or larger or in open hole 4⅛ inches or larger.

HOUSTON ENGINEERS, Inc.

HOUSTON, TEXAS

Preston 1927 Night, Taylor 1996 P. O. Box 276

Your inquiries either direct or through your supply dealer will receive immediate attention. Give us a ring day or night.

WILDCATS FROM ALL SECTIONS

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
EDWARDS COUNTY—		
McMan O&G Co., Schreiner 1	*	3895
HOWARD COUNTY—		
W. B. Andrews et al, Neal 1	*	4008

ANDREWS COUNTY—Deep Rock Oil Co.'s Hostetter 1, elev 3224 ft, top salt 1890 ft, sd 1990 ft.

BORDEN COUNTY — Greene O&R Co.'s Slaughter 1, spudded and sd. Ed. Hyde et al's Beal 1, lcn.

BREWSTER COUNTY—Ed. W. Bateman & Co.'s Nevill 1, elev 3950 ft, dr 1462 ft. Brewster Oil Co.'s Fee 1, spudded adn sd. C. Williams et al's Poncey 1, sd 500 ft. J. P. Johnson & Bert Weekly's Jackson-Harmon 1, lcn.

COKE COUNTY—Cates & Dennis' J. R. Mims 1, dr 1545 ft; Mims 2, spudded and sd. Lipan Oil Co.'s Rawlings 1, sd 2840 ft. Louisiana OR Corp.'s Powers 1, elev 2040 ft, dr hfw 3750 ft. Mid-Kansas O&G Co.'s Lackey 1, ur 8-inch cas to 3033 ft.

CONCHO COUNTY — Lloyd Jones et al's Jones 1, sd 660 ft. Exploration Co.'s Hartgrove 2, dk. J. L. Duffey-Loofbourrow et al's Hill 1, sd 1300 ft. J. L. Dufey-Clark & McGee's Lovelace-Lockett 1, sd 660 ft; Noyes 1, dr with show oil and water 1635-38 ft.

CRANE COUNTY—C. C. Duffey et al's Cowden 4, elev 2584 ft, top salt 710 ft, dr 2135 ft. Gulf Prod. Co.'s Waddell 6, top salt 1270 ft, dr 1610 ft.

CROCKETT COUNTY—Barbara Oil Co.'s Cox 1, elev 2051 ft, top lime 1082 ft, sd 1290 ft. W. W. Donnelly-W. A. Moncrief et al's Todd 1, (Sec. 35), spudded and sd. Ed. G. Lewis & W. T. Daniels' Pecos River Bed 1, spudded and sd. Tidal Oil Co.'s W. W. Weatherred 1, spudding. J. D. Wheeler et al's State Fee 1, sd 410 ft.

CULBERSON COUNTY — Deep Rock Oil Co. et al's Kloh 1, lcn. Hickey et al's Finley 1, ur 1680 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, dr 3495 ft.

DAWSON COUNTY—Magnolia Pet. Co.'s Jeter 1, elev 2889 ft, top salt 1640 ft, top lime 3560 ft, dr 5225 ft.

EL PASO COUNTY—C. E. Sillix et al's Malone 1, sd 1010 ft.

FISHER COUNTY—Bickerstaff et al's McWhirter 1, elev 1932 ft, sd 2000 ft. Cranfill-Reynolds & Sun Oil Co.'s Brown 1, dr by junk 1950 ft; Fleming 1, dr 1010 ft; B. F. Willingham 2, dr 210 ft. Culberson Bros. & Mesa Oil Co.'s A. J. Friffin 1, rig. J. B. Dunigan et al's Henry 1, sd 1475 ft. Gilman-McMurray & French's Cleveland 1, dr 560 ft. Hucony Gas Co.'s Marberry 1, elev 1876 ft, top lime 2960 ft, set casing 3195 ft. Landreth Prod. Corp.'s Cooper 1, dr 1500 ft. Bob Rainey et al's Marberry 2, elev 1929 ft, top lime 2995 ft, sd 3507 ft. I. E. Thompson et al's Newman 1, elev 1882 ft, top lime 2810 ft, testing good show oil 2843-45 ft. Texas Co. & Phillips Pet. Co.'s Hall 1, dk.

GAINES COUNTY — Pure Oil Co.'s Williamson 1, elev 3197 ft, top salt 2333 ft, dr red shale and anhydrite 2975 ft.

GARZA COUNTY—Emerald Oil Co.'s J. M. Boren 4, dr 435 ft.

GLASSCOCK COUNTY—Fred L. Kyle & Chas. Daniels' Meek 1, elev 2792 ft, dk. Gibson-Johnson et al's Mann 1, elev 2703 ft, top salt 1170 ft, sd 2210 ft. McElreath & Suggett's Underwood 1, lcn. Meriwether Oil Co.'s McDowell 2, elev 2517 ft, top salt 970 ft, top lime 2445 ft, set cas 2690 ft. Bob Penn et al's Hughes 1, elev 2733 ft, ur 10-inch cas 1117 ft. White Eagle O&R Co.'s Dunbar 1, elev 2705 ft, top salt 1140 ft, sd 2210 ft. World Oil Co.'s McDowell 1-C, elev 2530 ft, set 10-inch cas 750 ft.

TOM GREEN COUNTY—F. P. Green et al's Fee 1, sd 1810 ft.

HOWARD COUNTY—Greene O&H Co.'s Furrh 1, elev 2277 ft, top salt 1255 ft, top lime 2097 ft, sd 3503 ft. Harrison et al's Dodge 1, elev 2321 ft, top lime 1830 ft, sd 3257 ft. Phillips Pet. Co.'s Thomas 1, elev 2591 ft, top salt 1170 ft, top lime 3030 ft, dr 3870 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

HUDSPETH COUNTY — The California Co.'s University 1, elev 5833 ft, bad hole 461 ft. Lockhart Bros. et al's Western States fee (was Gardner-Mosley) 1, spudded and sd. Western States Oil Co.'s Gardner-Mosely 1, elev 5086 ft, sd 3155 ft; Moore 1, elev 5150 ft, sd 2760 ft.

IRION COUNTY — Furhman Pet. Corp.'s Sugg 1, Lse. 3, spudding. Kimbrough et al's Nutt 1, elev 2299 ft, sd 1420 ft. Kimbrough & Flinchbaugh's Tankersley 1, elev 2241 ft, spudded and sd. Kingwood Oil Co.'s Sugg 1, elev 2334 ft, dr lime 5675 ft. Western Oil Co.'s H. Horney 1, dr 755 ft. Signal Oil Co.'s Sugg 2, fsh 320 ft. Sun Oil Co.'s Tankersley 1, dr 1020 ft. Webb et al's Nutt 1, elev 2351 ft, dr 2555 ft.

JONES COUNTY—Culberson Bros. et al's Anderson 1, lcn. E. P. Campbell & Co.'s Herndon 28, ur 1800 ft. McClanahan et al's Hall 1, dr 280 ft. McGinley Corp.'s Whittemore 1, rig. McNeeley et al's Bland 1, spudded and sd. Mid-Sun Oil Corp.'s Hoehn 1, ur 2325 ft. Milt Richardson et al's Martin 1, dr 1185 ft. Roeser-Pendleton et al's Castle 1, sd 1050 ft. Sedgwick O&G Co.'s Brown 1, lcn; Routh 1, spudding. Tomberlin et al's Horn 1, spudded and sd.

KING COUNTY—Huff Oil Co.'s M. A. Martin 1, rig.

LOVING COUNTY—Hazell 1, dk; H. L. Lepp 1, dk; Hubbard (was Peden) 1, crooked hole 475 ft; Wheat-Lloyd 1-A, elev 2697 ft, top salt 715 ft, trace oil 2340-55 ft, dr 2660 ft.

LYNN COUNTY—Hart Oil Corp. & McCamey's Edwards 1, elev 3128 ft, ur 12-inch cas 740 ft. H. F. Miller et al's May 1, spudded and sd.

MENARD COUNTY—Carl G. Cromwell et al's Wilhelm 1, elev 2245 ft, dr 1565 ft.

MIDLAND COUNTY—O. H. Shoup et al's Parks 1, sd 4980 ft.

MITCHELL COUNTY—E. P. Campbell & Co.'s Pond 1, elev 2119 ft, top lime 1385 ft, dr 2815 ft. Clopton & Hammon's McKenzie 1, lcn. Simms Oil Co.'s Ellwood 1, spudded and sd. Teas & Wheeler's Radford 1, elev 2223 ft, top salt 667 ft, top lime 1365 ft, dr 3645 ft.

NOLAN COUNTY—Bradstreet et al's Kuteman 1, lcn. C. M. Root Drilling Co.'s Simpson 1, hfw 2350-80 ft, dr 2400 ft. White Eagle O&R Co.'s Allyn 1, elev 2158 ft, ur 2740 ft.

PECOS COUNTY—Alexander-Lyles et al's Sellman 1, elev 2672 ft, top salt 814 ft, top lime 1602 ft, sd hfw and show oil-gas, td 1655 ft. Geo. H. Anderson & Tower-McKanna's University 1, elev 2801 ft, top salt 1030 ft, top lime 1690 ft, plugged back from 1998 to make gasser at 1960-63 ft. Atlantic Oil Prod. Co.'s Sellman 1, elev 2751 ft, top salt 838 ft, top lime 1728 ft, sd 1793 ft. Benedum-Trees et al's Corder 1-A, elev 2713 ft, top lime 1840 ft, dr 3200 ft. M. H. Black et al's Pecos Land Fee 1, lcn. Buell-Hagan et al's University 1-B, lcn. K. A. Crowley et al's R. G. Heiner 1, lcn. M. Z. Dibble et al's Bonebrake 1, elev 2544 ft, top salt 1874 ft, pulled in dk, td 2004 ft. Doran & McGee's Pecos Land Fee 1, lcn. J. W. Grant et al's Turney 1, elev 2592 ft, top lime 1015 ft, sd 4002 ft. Grayburg Oil Co.'s University 1, lcn. Marland Prod. Co.'s Blakeslee 1, spudding. McCarty Oil Co.'s Gray 1, pull cas 600 ft. Mauch & Krogen's Holmes 1, elev 2325 ft, top salt 535 ft, sd 1010 ft. Pecos Valley Oil Co.'s Pecos Land Co. Fee 2, top salt 1107 ft, dr 1125 ft. Perren et al's H. J. Eaton 1, lcn. Phillips Pet. Co.'s J. L. Nutt 2, elev 3113 ft, top salt 1725 ft, dr 1735 ft. Schumaker et al's Williams 1, elev 2388 ft, sd 550 ft. Southern Crude Oil Pur. Co.'s Scharbauer 1, elev 3680 ft, fsh 3380 ft. Stein & McGee's Peterson 1, lcn. Talbot-Dittman et al's Unsicker 1, sd with good show oil with gas, td 1365 ft. Transcontinental's University 1, elev 2552 ft, top lime 1035 ft and 3315 ft, bad hole 4160 ft. Trees Oil Co.'s J. C. Trees 1, lcn. World Oil Co.'s Kloh 1, elev 2810 ft, sd 3105 ft.

PRESIDIO COUNTY—Brite Prod. Co.'s L. C. Brite 1, dr 4740 ft. Eastland Oil Co. et al's Tootle 1, spudded and sd. C. E. Miller et al's Tootle 1, cavey hole, td 2200 ft.

REAGAN COUNTY—California Co.'s University 5, elev 2879 ft, top salt 1280 ft, dr 2175 ft. R. V. Oberholtzer et al's Talley 1, lcn.

REEVES COUNTY—E. W. Brooks et al's Eddins 1, elev 2719 ft, top salt 1622 ft, top lime 3216 ft, sd 5658 ft. Davis et al's Kinney 1, spudded and sd, now abn. Exploration Co.'s Kinney 1, elev 2847 ft, sd 2900 ft. Dr. Kitsos et al's Kloh 1, elev 2786 ft, sd 1150 ft. Bob Penn et al's Bowles 1, dr 1500 ft. Southern Crude & Dixie Oil Co.'s Kloh 1, rig. Lee O. White et al's Kloh 1, rig.

RUNNELS COUNTY—G. W. Boyce et al's Lange 1, sd 1350 ft. Gene Mays et al's Currie 1, spudded and sd. Ira Nourse & Tilton's Cramer 1, co 2415 ft. Union Oil Co.'s Allen 1, dr 2565 ft.

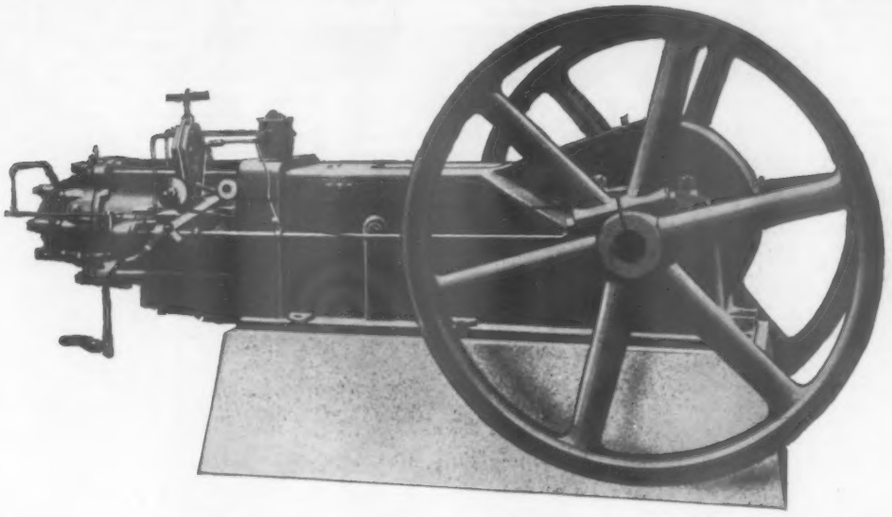
SCHLEICHER COUNTY—Ft. McKavitt Oil

Lift Injunction on Texas Land Sale

Austin, Texas — Temporary injunction restraining State Land Commissioner J. T. Robison from awarding leases on approximately 53,000 acres of wildcat land owned by the University of Texas in Ward and Andrews Counties, West Texas district, to a group of Abilene operators during a public auction January 2, was ordered dissolved by Judge J. D. Moore of the Travis County District Court here January 31. The injunction was obtained by the attorney general and others to halt the sale of approximately 1,500,000 acres of leases during the month of January by Commissioner Robison in accordance with the terms of the leasing act of 1925, and the latter contended that the 53,000 acres advertised for sale on January 2 could not be withdrawn from the market, although the balance was withheld until the legislature met on the following week and rescinded the law.

H. F. Gibson, F. Kirk Johnson, C. F. Reynaud and associates, of Abilene, presented the highest cash offer for the lands placed on the market January 2 in accordance with the law by Commissioner Robison, and the former joined in the legal action to have the leases awarded. The district court decision upholds Commissioner Robison in his contention that it was mandatory for him to proceed with the sale of the leases. However, the attorney general's department has announced that the case will be appealed to higher court.

FRANKLIN VALVELESS OIL AND GAS ENGINES



The new Franklin Oil Drilling Engine Type "OF". Ample power and simplicity. Easy to install and start. Low fuel cost.

Franklin's Your Choice

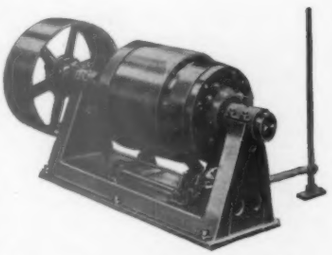
Because it fits your needs. When you load a Franklin Engine on your truck at the station you'll be surprised by the compactness. In fact, the Franklin is so compact you'll kind of wonder whether such a light, handy engine can show all the strength and stamina claimed for the Franklin.

After she's set up and you let 'er shoot, she displays so much power and flexibility you'll get to thinking she must be burning herself out. Then, with several years of work, when you look over your fuel bills and see how low they are; when, upon examination, you find the engine's in good condition, even after years of hard work—there is only one thing to conclude—and that is what we have concluded.

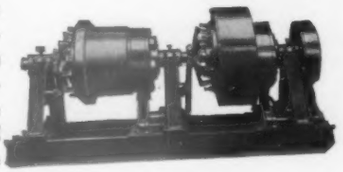
Franklin Oil Pumping Engines in 30, 40 and 50 horsepower. Can be equipped with reverse or one way clutch.

And don't forget the Franklin construction keeps out sand and grit and eliminates valve grinding.

The combination of fine material and expert designing reduce the power expense so much that installation with Franklin's is justifiable even though the machinery you have is not worn out.



The BG Clutch is light and durable—Steel discs and the best grade of friction lining—Pulley clutch 100% Roller Bearings. In reversing the shaft is reversed. Spider, lever and brackets and all under-rigging of steel. Permits use of larger diameter pulley for lower clutch speed. The BG will pull the largest bailer without faltering.



The 2 SD Clutch is on the same principle as the BG. It is heavier. Has two speeds in forward and reverse. Gears may be shifted at any speed and from any one gear to another. Let us send you information on these clutches.

FRANKLIN VALVELESS ENGINE CO.

Franklin, Pa.

Distributed by

OIL WELL SUPPLY CO.

Branches in All Oil Fields

Co.'s Tisdale 1, elev 2155 ft, sd 1535 ft. Interstate Exploration Co.'s Whitten 1, rig.

SCURRY COUNTY—R. B. Pender-Deickman et al's Davis 1, elev 2208 ft, top salt 445 ft, sd 1810 ft.

STERLING COUNTY — Foster-Gracey Oil Co.'s Foster 1, elev 2260 ft, ur cas 1809 ft. Miller Bros. et al's Foster 1, lcn.

SUTTON COUNTY — Phillips Pet. Co.'s Holman 1, elev 2247 ft, top lime 2315 ft, fsh 5770 ft. L. G. Priest et al's Geo. S. Allison 1, rig. Southern Crude & Dixie Oil Co.'s Allison 1, dr 700 ft.

TAYLOR COUNTY—Burnham et al's Amyx 1, dr 2225 ft. Grisham-Hunter Corp.'s Campbell 1, dr 885 ft. Mid-Continent Pet. Corp.'s Taylor 1, sd with 300 ft oih at 2384-87 ft, td 2391 ft. Thompson et al's Hammer 1, dr 1615 ft. L. H. Wentz et al's Armour 1, dr 265 ft.

TERRELL COUNTY—Milham Corp.'s Bassett 1, elev 2270 ft, sd 4580 ft. Keck-Pecos Oil Trust's Hamilton 1, elev 1733 ft, sd 1749 ft.

TERRY COUNTY—Superior Oil Prod. Co.'s Brownfield 1, elev 3205 ft, top lime 4565 ft, fsh 5080 ft.

VAL VERDE COUNTY—Dyer Bros. et al's Wilson 1, elev 2115 ft, sd 2605 ft. Producers Oil Co. et al's Everett 1, sd 1910 ft. Val Vert Oil Corp.'s Bassett 1-A, dr 3100 ft.

WARD COUNTY—Atlantic Oil Prod. Co. & Delmar Oil Co.'s Hayzlett 1, top salt 715 ft, dr 1300 ft. Barstow O&G Co.'s Monroe 1, rotary rig. J-H-L Oil Co.'s Hayzlett 1, top salt 725 ft, dr 915 ft. Lovelace et al's Redman 1, spudded and sd. Prairie O&G Co.'s Sealy 1, elev 2666 ft, top salt 1073 ft, top lime 3110 ft, plug back from 3505 to 3040 ft to make gasser. Rector Oil Co. et al's Johnson 1, elev 2438 ft, top salt 745 ft, top lime 2010 ft, ur 2550 ft. Talbot-Dittman et al's Dorr 1, elev 2430 ft, top salt 745 ft, fsh with hfw 2630 ft.

WINKLER COUNTY — Gulf Prod. Co.'s Scarborough 1, top anhydrite 1075 ft, dr 1195 ft. Prairie O&G Co.'s Scarborough 1, lcn. Shell Pet. Corp. & Llano Oil Co.'s Scarborough 4, dr 1015 ft. Texas-Canadian Oil Co.'s Kloh 1, rig.

YOAKUM COUNTY—Bert Weekly et al's Knight 1, spudded and sd.

EAST TEXAS

ANDERSON COUNTY—Humble's A. E. Todd B-1, Boggy Creek, coring 3595 ft; Neches River 1, Boggy Creek, building drk foundation; Lizzie Smith 3, Boggy Creek, dr chalk 3578 ft; C. W. Hurd, Boggy Creek, dr shale 2955 ft; Earl & Ragsdale 4 (in Cherokee County), Boggy Creek, ru; T. H. Jones B-1, Boggy Creek, ru.

BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, temp abn 3086 ft.

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, sd wo 1978 ft.

CASS COUNTY—Davis & Pigg's Ed Lambert 1, Ed Lambert sur, sd wo 1952 ft.

RED RIVER COUNTY—D. M. Buffington's Hoosier 1, Hughart sur, dr 1520 ft. Shad Harper's Garland 1, Jos. Wagley sur, sd wo 1862 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd wo 1440 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthews Moore sur, sd wo 3004 ft, sandy shale. Gulf Ref. Co.'s Caraway 1, Patterson sur, dr hard sand and gbo 2240 ft.

SOUTHWEST TEXAS

CALDWELL COUNTY—
Bartlett Bros., Martindale 2, 5 mi sw Lockhart ..... * 1602

BASTROP COUNTY—Livingstone et al's McCall 1, wo, sd 1010 ft. Owens et al's White 1, 2mi w Cedar Creek, dr 1620 ft, chalk; Goodman 1, 1½ mi from Cedar Creek, dr 382 ft, rock.

CALDWELL COUNTY—Shell's Wilhms 1, Jolly dist, lcn; School Land 1, 4 mi n Luling, drk. Bartlett Bros.' Martindale 2, 5 mi sw Lockhart, abn at 1602 ft. Anderson et al's Horner 1, dr 540 ft, shale. S. & M. Corp.'s Lynch 1, 5 mi e Lockhart, dr 2225 ft, lime.

DUVAL COUNTY—O. Henry Oil Co.'s Henry 1, blk 1879, Snodgrass subdiv., cor sand 1436-43 ft.

GONZALES COUNTY—Fynn et al's Wilhouser 1, Ottine area, dr 5012 ft, lime. Greene et al's Dix 1, Ottine dist., td 665 ft. Cranfill & Reynold's Webb 1, Ottin district, dr 3641 ft, shale. Empire's State 1, Ottine area, moving in. Indiana Pet. Corp.'s Karnstadt 1, Ottine district, lcn. Joe Bruner's Miller 1, 1 mi n Waelder, ru and sd.

GUADALUPE COUNTY—Magnolia's Schubert 1, lcn. Christie et al's Thomas 1, 12 mi ne Seguin, bailed dry, not enough oil for well, will drill deeper from 1053 ft. Sights et al's Woehler 1, 4 mi e Seguin, dr 1250 ft, shale. Miller Bros. Springs 1, 4½ mi south Seguin, td 1987 ft, will drill deeper in Austin chalk. Shell's Grein 1, 4 mi se Seguin, dr 925 ft shale. Simms Oil Co.'s Jandt 1, 2 mi w Seguin, dr 785 ft, shale.

MAVERICK COUNTY—Rycade Oil Corp.'s Sullivan 3, se Eagle Pass, dr 5460 ft; Chittim 2, se Eagle Pass, sd 7635 ft; Chittim 3, se Eagle Pass, dr 2380 ft, lime. Ryan Consolidated Pet. Corp.'s Indio Co. 2, 24 mi se Eagle Pass, td 1320 ft.

STARR COUNTY—The Texas Co.'s Resendez 1, dr 3685 ft, hard sand.

SOUTH LOUISIANA

ACADIA PARISH—E. F. Simms' Clement 1, Jennings, sd 3872 ft; Clement 2, Jennings, sd 3840 ft. Grace von Schueler 1, Jennings, dr 5085 ft, small show of oil. Jennings Oil Co. 1, Jennings, sd 3545 ft. Cockrell 1, Jennings, sd 4330 ft; Cockrell 2, dr 60 ft, gravel.

ASCENSION PARISH—Gulf's United Lands Co. 11, Sorrento, ru; Belle Helene Sugar Co. 1, Darrow, lcn. Triumph Oil Corp.'s J. D. Lacey et al 2, 1¼ mi se Sorrento, dr 1350 ft gbo. Burnside Oil Co.'s Roberts 1, dr 920 ft, gbo. Big Dome Drlg. & Dev. Co.'s and J. S. Kimbrough's Rearwood 1, sd 1000 ft. Baton Rouge Pet. Co.'s Liotta 1, sd 1000 ft.

CALCASIEU PARISH—Union Sulphur So.'s Fee 733, Sulphur, abn 3505 ft, after testing dry; Fee 735, Sulphur, dr 5612 ft, gbo; Fee 736, Sulphur, dr 3490 ft, water sand; Fee 739, Sulphur, dr 640 ft, gravel; Fee 740, Sulphur, dr 4450 ft, sand; Fee 741, dr 1750 ft, rock. J. W. Watson et al's La. Land Co. 1, Sulphur, prep to test at 5042 ft.

CAMERON PARISH—Pure Oil Co.'s Yount-Lee Oil Co. 7, Sweet Lake, set strainer to test at 4594 ft; Yount-Lee 8, Sweet Lake, dr 4200 ft water sand. Calcasieu Oil Co.'s Doiron 5, Kelso Bayou, lcn. The Texas Co.'s Calcasieu Lake B-4, East Hackberry, driving piling; Calcasieu Lake A-3, South Calcasieu Lake dome, lcn. Noble Oil Co.'s Ellender 3, Hackberry, dr 880 ft, gbo. Seise-Green-Sutton's Sonnier 1, Hackberry, cor sand at 2865 ft. Rycade Oil Corp.'s Yount-Lee 1, Hackberry, coring sand, showing oil at 4341 ft. Yount-Lee Oil Co.'s Perkins 1, Hackberry, dr 3835 ft sand; R. Vincent 1, Hackberry, dr 2740 ft, sandy shale. Cameron Oil Co.-Rycade's Gulf Land 3, Hackberry, bldg drk. Cameron Oil Co.'s Benson Vincent 1, Hackberry, abn in heaving shale at 3825 ft. Shell Pet. Corp.'s Watkins 6, Black Bayou dome, cor sand at 2826 ft; Watkins 7, Black Bayou dome, dr 165 ft gbo.

IBERIA PARISH—La. Land & Explo. Co.'s Vermilion Bay A-3, dr 4072 ft rock. Jefferson Lake Oil Co.'s Lake Peigneur 1, Jefferson Island, dr 746 ft. Gulf's Moresi 1, Loreauville, ru. Fannie Kling et al 3, Loreauville, dr 2945 ft sand.

IBERVILLE PARISH—Shell Pet. Corp.'s Wilbert 3, White Castle, coring sandy shale at 2668 ft. Standard of La.'s Wilbert 2, Bayou Blue dome, driving piling; Wilbert 3, lcn; Schwing 1, Bayou Blue dome, td 1775 ft, gbo. Union Sulphur Co.'s Schwing 3, Bayou des Glaise, td 3530 ft, lime.

JEFF DAVIS PARISH—Vacuum's DeVilbiss 1, dd from 4201 ft; Earl 1, lcn.

LA FOURCHE PARISH—Gulf's Stark et al 9, Thibodaux, ru.

PLAQUEMINES PARISH—Gulf's Morris & Rose 1, Spanish Pass, ru.

ST. LANDRY PARISH—The Texas Co.'s Botany Bay Fee 1, dr 3600 ft gbo.

ST. JAMES Parish—U. S. Mineral Dev. Co.'s Reynaud 1, sd 1720 ft.

POINTE COUPEE PARISH—Miller et al's Kornbacker 1, sd 1925 ft. Fruen et al's La Cour 1, ru, stdg.

ST. MARTIN PARISH—Rycade Oil Corp.'s State 3, Bayou Bouillon, ru; Bayou Bouillon 6, dr 1325 ft shale and lime; Bayou Bouillon 8, ru. Atchafalya Fee 3, Bayou Bouillon, cor sand and shale at 4475 ft. Atchafalaya Fee 5, Bayou Bouillon, drk Ohio Oil Co.'s Martin et al 3, Hager dome, td 4105 ft. Yount-Lee Oil Co.'s La. Pet. Co. 4, Anse la Butte, ru.

ST. MARY PARISH—J. Dannenbaum et al's Le Blue 1, Charenton, sd 3015 ft.

TANGIPAHOA PARISH—Tanli Oil Co.'s Weinberger 2, sd 4050 ft. Joan Dev. Co.'s Lake Superior Pil'ng Co. 1, td 220 ft.

TERREBONNE PARISH — Southern Ga Co.'s Peoples Sugar Co. 1, Houma, sd 2287 ft The Texas Co.'s Lake Barre 1, Lake Barre dome, lcn; Lake Pelto B-1, Lake Pelto, lcn Timbalier Bay A-1, Timbalier Bay, lcn; Bay Coon Road B-1, lcn; Dog Lake Bayou A-1, lcn Four Isle Bayou B-1, lcn.

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BRAZORIA COUNTY—		
F. A. Bartlett, Dannnenbaum 8, Stratton ridge	*	3145
COLORADO COUNTY—		
Humble, Byers 1, Altair	*	790
GOLIAD COUNTY—		
Southern Crude Oil, J L. Pettus 1, 10 mi nw Goliad	*	3850
HARDIN COUNTY—		
Gaddy O l Co., Sternberg 1, Kountze	*	1775
HARRIS COUNTY—		
Cedar Bayou Oil Co., Johnson 1, 8 mi n Goose Creek	*	4650

AUSTIN COUNTY — Humble's Hardy 2, Raccoon Bend, r 3256 ft; A. Crawunder C-1, Raccoon Bend, dr 3250 ft shale; Sherrill 1, Raccon Bend, dr 198 ft; R. Dietrich 2, Raccoon Bend, ru; Walton 2, Raccoon Bend, dr 3000 ft; Urban 2, Raccoon Bend, ready for rig to go deeper; Urban 3, Raccoon Bend, dr 1120 ft, sand and shale; Thompson 3, Raccoon Bend, ru; J. W. Wilson 1, Raccoon Bend, dr 495 ft, shale and lime. J. W. Wilson 1, Raccoon Bend, E. Kearns 2, Raccoon Bend, dr 565 ft sand and shale; E. B. Wilson 2, Raccoon Bend, abn 1200 ft; W B. Wilson 3, ru; E. Ueckert 1, Raccoon Bend, dr 530 ft. H. D. Brown's Brazos River 1, lcn.

BRAZORIA COUNTY—Shell Pet. Corp.'s Allen 5, Allen dome, coring sandy shale with slight oil show at 4454 ft; Reese 3, Allen dome, dr 3415 ft sandy lime. Empire G. & F. Co.'s Brock 2, dr 2830 ft, shale and lime. F. A. Bartlett's Dannenbaum 8, Stratton Ridge, abn at 3145 ft.

CALHOUN COUNTY—Baker & Thompson's Thomas 1, 9 mi w Pt. Lavaca, td 2390 ft.

CHAMBERS COUNTY—Pure Oil Co.'s Mayes 1, Lost Lake, dr 900 ft, lime rock; Lost Lake 2, Lost Lake, dr 3235 ft gbo. Gulf's Wilborn 1, Anahuac, dr 3865 ft, gbo and lime. Mills Bennett Prod. Co.'s Kirby 2, Barbers Hill, td 5428 ft, sdtrk 5411 ft; Smith 2, Barbers Hill, drk. Mills Bennett-Republic's Means 1, Barbers Hill, dr 2827 ft, shale. Humphreys Corp.'s Kirby C-1, Barbers Hill, fl 1375 bbls; Barber 1, dr 4843 ft, sandy lime and shale. Kirby B-6, Barbers Hill, dr 5571 ft, sandy shale showing oil. Mike Kouri's Shaw 1, Barbers Hill, dr 800 ft hanrd sand; Yount-Lee Oil Co.'s Chambers Co. Agriculture Company 1, s side of fld, Barbers Hill, flowing 4700 bbls, partially pinched; Chambers Co. Agri. Co. 2, Barbers Hill, ru; Richardson 2, sw side Barbers Hill dome, completed as 30-barrel pumper at 2090 ft; Richardson 3, Barbers Hill, lcn. Joe Bashara's Tarbutton 1, Barbers Hill, e side, dr 4647 ft, sandy shale.

COLORADO COUNTY—Rich Oil Corp.'s Brun 1, 3 mi ne Columbus, sd 1215 ft. The Texas Co.'s Kveton 1, Cat Springs, dr 1006 ft, shale. Humble's Byers 1, Altair, abn 790 ft. Shell's Neuendorff 1, Bernado, moving in. Merritt et al's Zverck 1, 2 mi e Ellinger, dr 320 ft, shale.

FAYETTE COUNTY—Phalen et al's Cervanca 1, 6 mi s La Grange, sd 3200 ft. National Oil Co.'s Melcher 1, Plum, set surface casing. Moore et al's Kerr 1, Muldoon, sd 2078 ft.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 4, Boling, dr 3755 ft, sand and shale; Rodgers 2, Boling, dr 2425 ft, gbo and lime. The Texas Co.'s Dippel B-1, Boling, dr 974 ft, hard sand; Dippel A-1, Boling, dr 3219 ft, lime; Pleasants 1, Boling, stdg; E. C. Farmer 2, Boling, ru; Wheat 4, Big Creek, dr 3643 ft, shale. Gulf's Moore 18, Moores field, dr 1550 ft, gbo. Boling Dome Oil Corp.'s Armstrong 1, Boling, cor sand and sandy lime at 3840 ft. Humble's Brazos Farm 2, Sugarland, ru; Brazos Farm 3, ru; Brazos Farm 4, drk; Sugarland Industries 5, Sugarland, ru; Deathridge 2, Sugarland, dr 3556 ft sand; Nelson 1, Sugarland, dr 3442 ft; Camp 2, Sugarland, dr 1990 ft, rock. South Texas Explo. Co.'s Hartfield 1, Needville, tested salt water at 5005 ft, will deepen.

GALVESTON COUNTY—Long et al's Iri-

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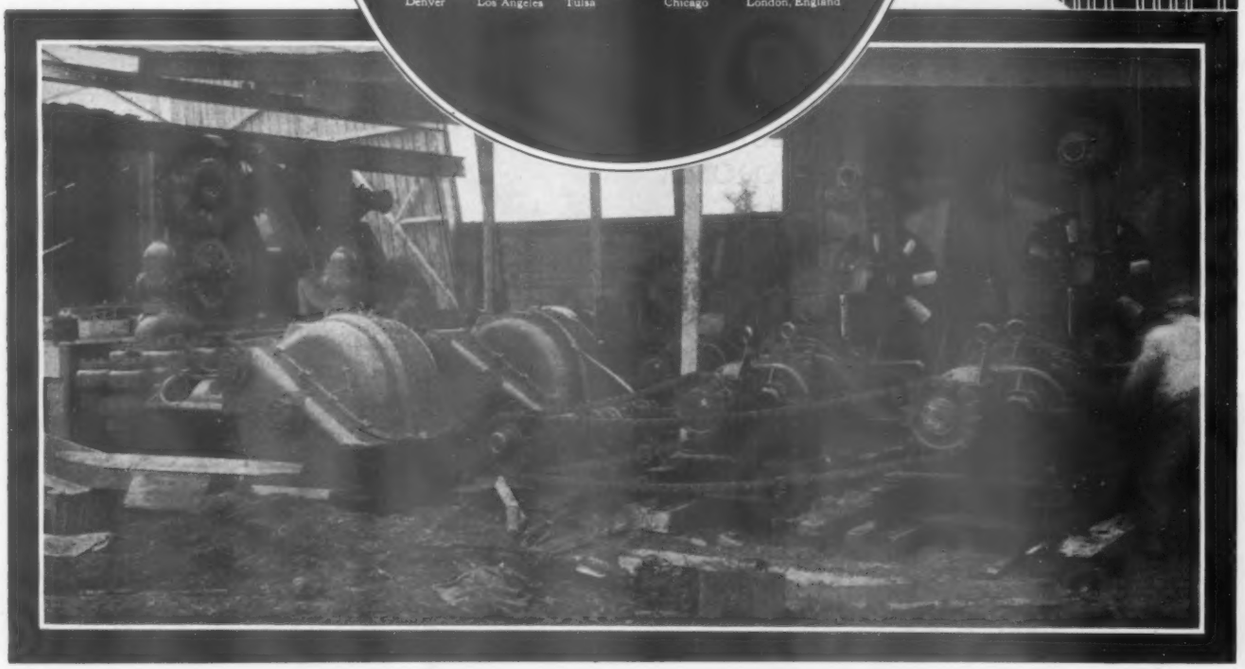

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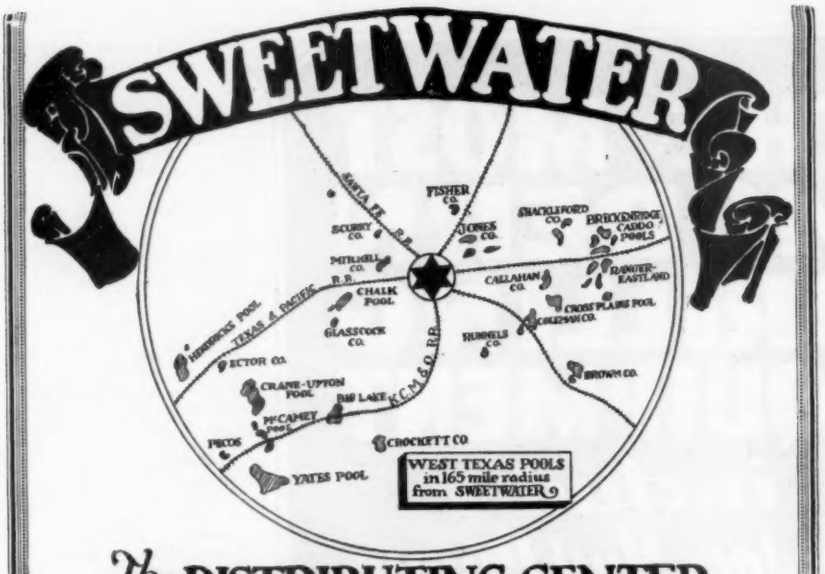

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vin & Bishop 1, 2 mi s Dickinson, sd 4332 ft. Republic Prod. Co.'s Lobit 1, 1 mi nw Dickinson, r 3815 ft.

GOLIAD COUNTY—McCarson et al's Murry 1, Goliad Townsite, lcn. Southern Crude's J. L. Pettus 1, 10 mi nw Goliad, abn at 3850 ft, shale.

HARDIN COUNTY—Gaddy Oil Co.'s Sternberg 1, Kountze, abn 1775 ft, shale. Guedry Drlg. Co.'s Guedry 1, 3 mi s Batson, drk.

HARRIS COUNTY—Torsen et al's Stewart 1, 4 mi sw Genoa, sd 691 ft. Hunt et al's Lobit 1, 4 mi n Goose Creek, sd 2145 ft. Humble's Warren 5, Hockley, dr 1788 ft, hard rock; Minnetex 1, Mykawa, dr 5332 ft; Simms-Smith 74, Goose Creek, abn at 6967 ft, in sticky shale. Cedar Bayou Oil Co.'s Johnson 1, 8 mi n Goose Creek, abn at 4650 ft. The Texas Co.'s House 22, Humble, dr 3988 ft, hard sand and shale. Paxton et al's Brubacker 1, 1 mi ne Clodine, sd 1125 ft. South Texas Pet. Co.'s Hicks-Higbee, Almeda, dr 2347 ft, sticky shale; Morris 3, Humble, dr 2080 ft. gbo. Baldwin & Leyland's Kitzman 1, 2 mi n Cypress, sd 3175 ft. Brains et al's Lentze 1, 4 mi s Tom Ball, sd 1120 ft.

JACKSON COUNTY—The Texas Co.'s Moore 1, Edna, dr 3144 ft, shale. Wright Bros.' Classen 2, Edna, dr 3795 ft, shale.

JEFFERSON COUNTY—J. W. Farhar et al's Rohwedder 1, 5 mi ne Beaumont, dr 1972 ft, gbo. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, drk. Westbury Synd.'s West 1, 1 mi ne Westbury, sd 2625 ft. Yount-Lee Oil Co.'s Nona Mills 1, 5 mi s Beaumont, lcn. River Oil Co.'s Ship Channel Land Co. 1, 2 mi se Beaumont, sd 632 ft. Bleakie Oil Co.'s Tollivar 1, 2 mi northeast Westbury, dr 1462 ft, shale and lime. The Texas Co.'s Pipkin & Davis 1, Big Hill, dr 4085 ft, sand and shale.

LAVACA COUNTY—The Texas Co.'s Russick 1, 6 mi s Ezell, dr 1868 ft, sandy shale.

LIBERTY COUNTY—Barlow et al's Hinchcliff 1, 2½ mi ne Cleveland, sd 2215 ft. Kouri et al's Campbell 1, 6 mi s Cleveland, sd 2000 ft. Big Dome Interests' Finley 2, 3 mi nw Hardin, drk. The Texas Co.'s Davis 2, Davis Hill, ru. Humble's Sterling 3, Moss Bluff, dr 3093 ft, hard sandy lime. Sun Oil Co.'s Koveleika 1, N. Dayton, swabbing salt water and sligt oil and gas show at 4461 ft. Union Explo. Co.'s Esperson 2, 5 mi s Dayton, ru.

MATAGORDA COUNTY—Rycade's Hudson-Humble 4, Markham, dr 3165 ft, gbo and shale. Crossland et al's Hawkins 1, Shepherds Mott, dr 2910 ft, gbo. Dr. P. S. Griffith's Culver 1, e Citrus Grove, sd 3215 ft. Baer 1, 1½ mi n Gulf Hill, sdtrk at 1652 ft.

ORANGE COUNTY—Veteran Oil Co.'s Reed 1, 2 mi se Orange field, sd 2072 ft. The Texas Co.'s Kuhn 1, 4 mi e Spindle Top, ru.

REFUGIO COUNTY—Blanco Oil Co.'s St. John 1, 3 mi nw Refugio, td 2250 ft. Davidson-Horn's Howard 1, 3 mi sw Refugio, sd 1960 ft. Magnolia's Glenwinkle 1, dr 2505 ft, gbo.

VICTORIA COUNTY—Humble's Kahutek 1, 1½ mi northeast Nursery, td 603 ft.

WALLER COUNTY—Dixie O. & G. Co.'s Brazos River State 1, San Felipe, sd 500 ft. The Texas Co.'s Young 1, 3 mi e Raccoon Bend, ru.

WASHINGTON COUNTY—Sun's Mrs. J. Grote 1, Clay Creek, prep to pull screen, td 1395 ft; L. Marcus 1, Clay Creek, dr 3585 ft, shale; Einman 1, Clay Creek, plugged back to 1850 ft from 2710 ft to test; H. Witte 1, Clay Creek, came in for 165 bbls per hr from 935-1250 ft; G. F. Grote 4, Clay Creek, lcn; Mrs. J. Grote 2, Clay Creek, lcn; C. Einman 2, Clay Creek, lcn; C. H. Marcus 1, Clay Creek, dr 770 ft, shale showing gas. Davis et al's Seward 1, ½-mi n Independence, dr 1283 ft sandy shale.

WHARTON COUNTY—Hearte Oil Co.'s Brown 1, 3 mi s El Campo, dr 1550 ft sand and shale.

OKLAHOMA

WOODS COUNTY—T 28n, R 18w, Sec. 11, Geo. Vincent et al's Freedom 1, c sw, ponds for deep test.

GRANT COUNTY—T 28n, R 3w, Sec. 24, Lario O. & G. Co. et al's Conneil 1, nwc, 2450 ft hfw, run 8-inch.

HARPER COUNTY—T 27n, R 21w, Sec. 24, A. F. Kopisch Selman 1, nec se, spudded and sd.

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair's Share 1, c ne sw, rig. T 27n, R 15w, Sec. 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw, spudded and sd.

GRANT COUNTY—T 26n, R 4w, Sec. 34,

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Sooner State Oil Co.'s Royce 1, swc nw, sd 550 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent & Nat'l Union's McNeal 1, nw cor ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft, blk. in litigation.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu Vi Bar et al's 1, sec sw, dr 2350 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Vollner 2, nec se ne sw, lost tools 5640 ft, sd.

CIMARRON COUNTY—T 5n, R 5e, Sec. 22, Magnolia's School Land 1, c se ne, dr 420 ft.

TEXAS COUNTY—T 1n, R 18e, Sec. 11, Three Way Oil Co.'s Price 1, sec nw, sd 3490 ft.

WOODWARD COUNTY — T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

WOODS COUNTY—T 24n, R 13w, Sec. 18, Miller and others Copenhaver 1, nwc, spudded and sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, Washoma Oil Co.'s Acre 1, swc ne, rig.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, sd 4755 ft.

WOODWARD COUNTY—T 23n, R 20w, Sec. 9, Billy Oil Co.'s Wyatt 1, c se, dr 1800 ft.

MAJOR COUNTY—T 23n, R 16w, Sec. 4, Wilson et al's 1, nec sw, rigging up.

WOODWARD COUNTY — T 21n, R 19w, Sec. 15, Burgoyne Bros. 1, swc se ne, sd 1950 ft.

WOODWARD COUNTY — T 21n, R 21w, Sec. 25, Sharon's Elmore 1, swc, sd 3025 ft, rig down.

MAJOR COUNTY—T 20n, R 14w, Sec. 23, Keller et al's Horton 1, c ne ne, spudded and sd.

GARFIELD COUNTY—T 20n, R 4w, Sec. 9, Marland's Looman 1, nec se, sd 5735 ft. csg parted. Sec. 12, Marland's Miller 1, swc, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckleby & McCoy's Perfect 1, nec, fsh 4395 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Haley & Consolidated Drlg. Co.'s Quier 1, sec sw, sd 3970 ft.

KINGFISHER COUNTY — T 16n, R 6w, Sec. 27, Crawford & McKenna's Sturgeon 1, sec sw, sd 4846 ft.

BLAINE COUNTY—T 15n, R 12w, Sec. 26, W. J. Donley's Dickens 1, sec nw, dr 4420 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spears' Piatt 1, sec ne, sd 3223 ft. T 13n, R 10w, Sec. 18, Wirt Franklin & I. T. I. O.'s North 1, c ne ne, dr 2180 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 18, Slick & Bailey's Lufkin 1, c ne se, dr 4845 ft. T 12n, R 3w, Sec. 15, Cromwell et al's Thompson 1, sec ne ne, dr 7130 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, sd after spudding.

OSAGE COUNTY—T 22n, R 8e, Sec. 8, Harry McGill's 1, sw se, sd 2688 ft.

PAWNEE COUNTY—T 22n, R 5e, Sec. 33, Washoma Oil Co.'s Buffalo 1, sec nw, td 3812 ft, pb to 3200 ft, sd.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, dr 3660 ft. T 16n, R 5e, Sec. 2, L. C. Wheeler & W. K. Mote et al's Wolfe 1, nwc ne sw, dr 832 ft. T 16n, R 6e, Sec. 19, Flynn & Morgan's Finely 1, swc, roc. T 15n, R 6e, Sec. 23, Shaffer O. & R. Co. et al's Pinkston 1, nec sw, 4222 ft water, dry and abn. T 12n, R 3e, Sec. 29, Phillips' Roberson 1, sec nw, rig.

OKFUSKEE COUNTY—T 12n, R 9e, Sec. 30, Tidal Oil Co.'s Barnett 1, sec ne ne, sand 3945-75 ft, 13M gas and water, fsh.

MUSKOGEE COUNTY—T 13n, R 18e, Sec. 33, L. T. Haynie's Linder 1, c se, sd 2307 ft.

McINTOSH COUNTY—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, spudded and sd.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, Wilcox 5443-67 ft, drilled all week and made no hole.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, sd 1800 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, 1½M gas 2518-22 ft, dr 2550 ft.

SEMINOLE COUNTY—T 11n, R 6e, Sec. 27, Fuhrman's Fay 1, sec nw sw, td 4773 ft, plugging.

OKFUSKEE COUNTY—T 11n, R 7e, Sec. 21, T. B. Slick's Wolfe 1, sec ne se, dr 4000 ft.

SEMINOLE COUNTY—T 11n, R 7e, Sec. 34, Phillips' Mills 1, nwc sw, dr 3660 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec. 8, Slick and Phillips' Sudik 1, c ne ne, dr 4096 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 16, McCulloch et al's Lincoln 1, sec nw lcn. T 10n, R 7e, Sec. 5, Marland Oil Co.'s Strothers 1, nwc se ne, dr 3782 ft.

POTTAWATOMIE COUNTY—T 9n, R 5e, Sec. 30, Magnolia Uet. Co.'s Germany 1, sec nw, 4395 ft testing. T 8n, R 2e, Sec. 24, Superior Oil Corp.'s Jones 1, swc nw ne, dr 4937 ft, water. T 8n, R 3e, Sec. 12, T. B. Slick's Nix 1, sec nw nw, dr 4140 ft.

SEMINOLE COUNTY—T 8n, R 8e, Sec. 4, McCulloch's McGilbray 1, swc ne, dr 1980 ft.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner State Oil Co.'s Vandeveer, nec nw sw, sd 3120 ft.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec. 17, T. B. Slick's Spangler 1, nwc se nw nw, fsh 6098 ft, water. T 6n, R 4e, Sec. 19, Rush & Baughm's Laster 1, sec ne ne, bldg rig.

McCLAIN COUNTY—T 5n, R 3e, Sec. 22, Mid Cont. Pet. Corp.'s 1, sec, bldg rig. T 5n, T 5n, R 3e, Sec. 29, Empire's Bonner 1, sec nw nw, dr 4580 ft.

PONTOTOC COUNTY—T 5n, R 4e, Sec. 36, Denver P. & R.'s Roberts 1, sec ne ne, dr 540 ft.

SEMINOLE COUNTY—T 5n, R 6e, Sec. 11, Slick's Harjo 1, nwc ne, td 3950 ft, plugging.

HUGHES COUNTY—T 5n, R 9e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw, ur 6-inch 3345 ft.

PONTOTOC COUNTY—T 4n, R 8e, Sec. 25, Independent's Hampton 1, nec se, spudding.

PITTSBURG COUNTY—T 4n, R 12e, Sec. 32, Kerr & Key's Rall 1, c nw nw, dr 100 ft.

COAL COUNTY—T 2n, R 8e, Sec. 6, J. S. Cosden, Inc.'s, Richardson 1, nwc ne ne, rig.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee's Wolfe 1, nwc, sd 1850 ft.

GARVIN COUNTY—T 1n, R 3e, Sec. 32, Ramsey & Malickey's c sw ne, dr 360 ft.

COAL COUNTY—T 1n, R 9e, Sec. 24, Galbreath et al's Jones 1, swc se, sd 3270 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's Wellman 1, c se, sd 100 ft.

ROGER MILLS COUNTY—T 11n, R 26w, Sec. 4, L. C. Hivick's Davis 1, c nw ne, sd 700 ft.

BECKHAM COUNTY—T 8n, R 25w, Sec. 1, C. L. Martin's Daly 1, c nw se, dr 2640 ft. T 8n, R 22w, Sec. 20, Carson et al's Denby 1, swc se ne, dr 885 ft. T 8n, R 21w, Sec. 33, Day Oil Co.'s Ault 1, c nw nw, dr by tools 1503 ft.

KIOWA COUNTY—T 7n, R 17w, Sec. 34, G. B. Cloyes, Bristle 1, swc ne, dr 800 ft. T 7n, R 15w, Sec. 35, David Malernee's Van Kirkland 1, nwc, sd 858 ft, flowing sulphur water. T 6n, R 15w, Sec. 6, Johnson-McDowell 1, c sw ne, plugged and abn 2707 ft. T 6n, R 14w, Sec. 32, Russell & Sloan's Madden 1, nec sw sw, dr 625 ft.

CADDO COUNTY—T 6n, R 12w, Sec. 29, W. J. Hartley's Galbreath 1, sec nw se, owdd, sd 3394 ft.

COMANCHE COUNTY—T 4n, R 11w, Sec. 2, Wirt Franklin Pet. Corp.'s Hollow 1, nwc, dr 3239 ft.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, Houseman et al's Northington 1, nec, sd 2020 ft.

KIOWA COUNTY—T 1n, R 17w, Sec. 15, Allen Bros.' Howell 1, nwc se, dr 610 ft, show gas.

STEPHENS COUNTY—T 1n, R 7w, Sec. 2, Stahl & Burris' Jefferson 1, sec ne nw, pulled 6⅝-inch co.

COTTON COUNTY—T 1s, R 11w, Sec. 34, Shasta Oil Co.'s Indian 1, nec, lcn.

STEPHENS COUNTY—T 1s, R 7w, Sec. 12, Ilsing, Russell & Nance's Houston 1, nec sw sw, show oil 2328-35 ft.

KIOWA COUNTY—T 2s, R 16w, Sec. 6, Landfair's 1, sec sw se, dr 2535 ft.

COTTON COUNTY—T 2s, R 12w, Sec. 31, Pearce & Brown's Heitzler 1, sec nw, dr 1575 ft.

TILLMAN COUNTY—T 3s, R 18w, Sec. 29, Dixie Oil Co.'s Harrison 1, nec nw, dr 2571 ft.

COTTON COUNTY—T 2s, R 10w, Sec. 11, E. J. Stumpf's Jones 1, nwc ne, lcn.

STEPHENS COUNTY—T 3s, R 8w, Sec. 26, E. J. Stumpf's Simmons 1, swc, rur.

COTTON COUNTY—T 4s, R 12w, Sec. 16, Guiler & Dyson's Thamas 1, sec sw, sd 2127 ft.

JOHNSTON COUNTY—T 1s, R 7e, Sec. 29, Smitty-Kinsley's Lane 1, sec nw, sd 1306 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co.'s Anderson 1, sec ne se, dr 350 ft. T 5s, R 3w, Sec. 19, Devonian Oil Co.'s Myer 1, nwc se, dr 2325 ft.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. J. Endicott's Craig 1, c nw ne, dr 895 ft.

MOUNTAIN STATES

NEW MEXICO

CHAVES—Snowden & McSweeney, Merchant 1, ne 27-15s-23e, 6⅝-inch stand cem., 3458 ft. R. E. Neal et al, Russell 1, 21-14-25e, stand 1100 ft. Warman et al, 1, sw 23-13s-24e, stand 251 ft. Tanehill et al., Butler 1, se 15-12s-24e, spudding 115 ft. Transcontinental, Roberts 1, 1-14s-28e, ready to spud.

DE BACA—Matador Oil Co., State 1, sw 6-4n-20e, td 630 ft, wtg pipe. McAdoo 1, ne 16-1s-27e, about ready to resume, waiting for equipment, td 4190 ft. Transcontinental, McWhorter 1, 6-35-22e, dr 1845 ft.

GUADALUPE—Hanchett Oil Co., 2, 14-8n-24e, dr 605 ft.

LEA—Midwest, Capps 31, sw 3-19s-38e, rigging up. Midwest, Farnsworth 19, 12-26-37e, fsh 3900 ft. Midwest, Farnsworth 13C, 13-26-36e, dr 1025 ft. Marland, Lynn 1, 26-23-36, 40M gas mudd. at 3730 ft. Marland, Brooks 1, sw 8-20s-33e, abn 4003 ft. Marland, Reed 1, 22-20s-36e, dr 2750 ft. Marland, Meyers 1, 26-20s-37e, dr 3595 ft. Marland, Warren 1, 29-20s-36e, stand cem. 2930 ft. Marland, Lockhart 1, 31-21s-36e, dr 3625 ft. Gypsy Oil Co., Mattern 1, 24-21s-36e, dr 165 ft. Exploration Co., Record 1, 26-19s-35e, td 4556 ft. Morton et al, State 1, ne 32-11s-38e, stand 1112 ft. Texas, Lynch 1, se 34-20-34, td 1120 ft. Texas Sheppard 1, ne 6-26s-37e, spray oil at 3230 ft, tools lost. Texas, Humphreys 1, nw 18-20s-32e, lcn. Texas Moberly 1, se 17-26s-27e, dr 3425 ft. Curtis Drlg. Co., Nixon 1, 22-18s-34e, sd 1150 ft. Cranfill & Reynolds, Wilson 1, ne 23-25s-36e, prep to spud. Skelly Oil Co., Joiner 1, se 26-25s-36e, showing some water with oil, td 3297 ft. Hill & Abel, Maechtel 1, sw 5-26s-33e, fsh 4840 ft. Maljamar O. & G. Corp., Pearsall 2, 39-17s-32e, dr 4080 ft. Empire Gas & Fuel Co., State 1A, nw 12-31s-34e, dr 3420 ft. Texas Pacific Coal & Oil Co., State 1, sw 22-23s-35e, dr at 137 ft. Prairie O. & G. Co., Slattery 1, ne 22-22s-34e, ready to spud. Henderson et al, McDonald 1, se 18-20s-34e, dr 1110 ft. Vacuum Oil Co., 1, 14-17-34, lcn.

ROOSEVELT—J. T. Keegan et al, Pepper 1, 6-1s-36e, ready to bld rig. Smith & Sloan, Lovern 1, se 4-3s-35e, mvg in.

SAN JUAN—Continental Oil Co., Munoz 17, 2-29-19, hole caving 6338 ft. Dorothy Oil Co., 29-30-9, sd 712 ft, making repairs. Huerfano Oil Co., Wiltbank 1, 25-29-11, td 800 ft. San Juan Pete Co., 1, 9-29-13, sd 2950 ft. Kirtland Drlg. Co., Hunt 1, 10-29-15, td 450 ft. Kutz Canon O. & G. Co., Day 1, 29-28-11, dr 675 ft. Blackrock Oil Co., 1, sw 11-25s-13w, sd temp 1550 ft. Iowa Oil Synd., Viles 2, 28-29-11, re-cem. at 830 ft. Angel Peaks Oil Co., Kutz Canon 1, 11-28n-11w, co at 1815 ft. R. R. Burke et al, Deneen 1, 18-21-13, compl. as water well 1006 ft. Hall et al., se 507 ft. Milwaukee-N. M. Synd., Beardsley 1, 30-28n-11w, sd 1100 ft. Childers D. & P. Co., Weatwater 2, nw 24-31-16w, dr 1960 ft.

SAN MIGUEL—E. Adams et al., Deason 1, 14-15n-16e, sd 1235 ft. Benedict-Wilson 1, ne 25-17n-16e, sd 800 ft.

SOCORRO—Arnold et al, 2, ne 13-63-10w, dr 1400 ft.

TORRANCE—Bluhall O. & G. Co., 20-6n-10e, dr 1545 ft. Hall et al, Pinos Wells 1, sw 25-3n-13e, stndg 400 ft. Sinnock et al, Kutchin 1, ne 13-7n-7e, spudded 100 ft.

VALENCIA—Rio Puerco Oil Co., N. M.-Ariz. Land Co., 2, nw 13-6n-2w, wait pipe 3145 ft. Acme Oil Co., N. M.-Ariz. Land Co., 1, 26-6n-3w, ur 6⅝-inch td 3650 ft.

WYOMING

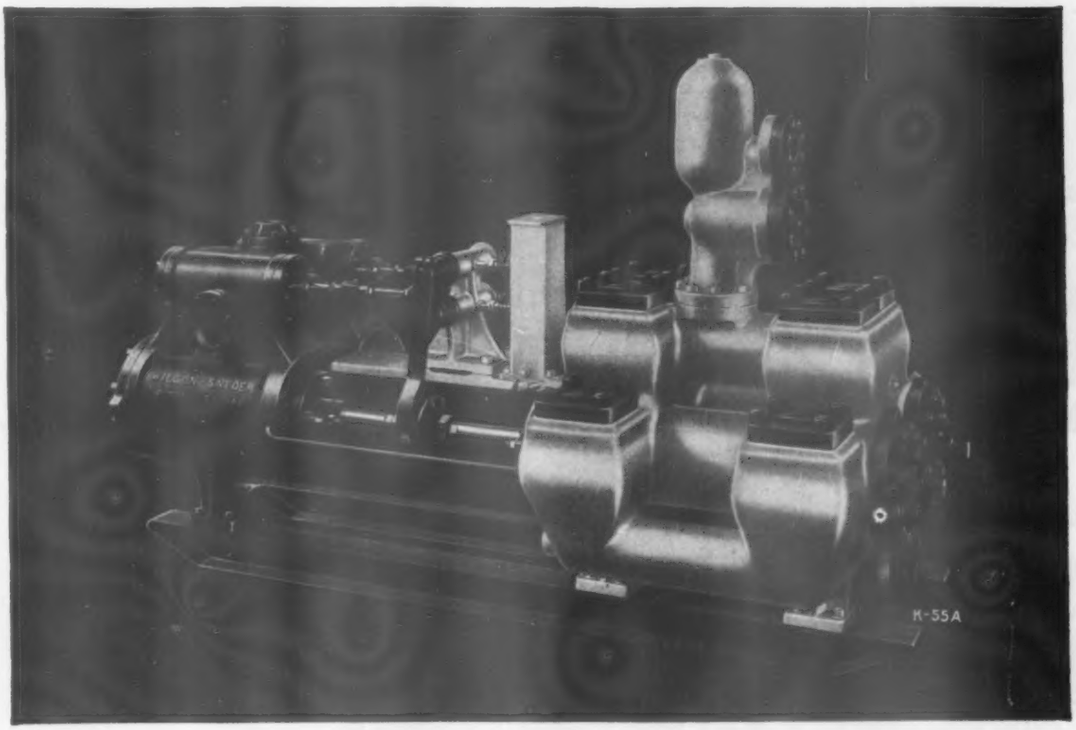
BIG HORN—Utah Southern Oil Co.'s 3, 26-56n-87w, test show 3763 ft. P. & R. 3, 24-56-98, sd 2708 ft. Prairie O. & G. Co.'s Chilcote 1, 35-56n-95w, ur to 2580 ft. P. & R., South Frannie 1, 7-57-97, ur to bottom at 1573 ft.

CARBON—P. & R., 2-19-88, sd 4003 ft. P.

WILSON

GULF COAST DISTRIBUTOR FOR

Wilson-Snyder Slush-Pumps



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& R., O'Brien Springs 7, 12-24-88, dr 320 ft.

FREMONT—P. & R., Muskrat 2, nw 1-33n-92w, lcn. Gates & Holman, 6-33-94, spudding. McKinney-Coastal 1, 22-3n-1w, rig.

HOT SPRINGS—Texas Prod. Co., sw 23-45n-100w, dr 1014 ft.

LINCOLN—Midwest Refining Co., Waterfall 1, 35-22-115, td 2400 ft.

PARK—California Exploration Co. and P. & R., Pitchfork 1, 12-48n-102w, cem 20-inch at 225 ft. Midwest, Rosenburg 36, 25-58-98, spudded 68 ft. Midwest, Kirk 1, se 23-58-98w, ur and co 1320 ft.

SWEETWATER — Prairie O. & G. Co., Tucker 1, 18-13-99, sd for winter 2480 ft. Ohio Oil Co., Humphreys 1, 2-12-101, dr below 2129 ft.

SUBLETTE—California Co., Wyss 1, 12-32n-115w, dr 1283 ft. California Co., Buchell 1, 11-29-115, ur 2503 ft.

UINTA—California Co., U. P. 1, 7-17-116w, dr 2449 ft.

UTAH

(Most of the operations in Utah have been forced to shut down for the winter.)

GRAND COUNTY — Utah Southern, Salt Valley 1, 13-23-21, will deepen from 3001 ft, when No. 1 A. Shafer is completed. Utah Southern, Shafer 1A, 36-26-20, dr 2665 ft.

DUCHESNE — Utah Southern Oil Co.'s Farnsworth 1, 29-4-1, dr 2560 ft.

WAYNE—Phillips Pete Corp.'s 1, 16-27-16, fsh 4575 ft.

MONTANA

(The severity of the Montana winter has forced the shutdown of almost all operations in the state.)

BLAINE—Ohio Oil Co.'s Winngert 1, 3-34n-32e, dr 2600 ft.

CARBON—Ohio Oil Co.'s Northern Pacific 1, 11-7s-21e, fsh tools 4558 ft.

CHOTEAU—Geraldine O. & G. Co.'s, ne 1-21-11e, dr 1725 ft.

GALLATIN — California Co.'s Ringling 1, 35-5n-7e, dr out bridge 600 ft.

TETON—Texas Pacific, 12-22-1w, sd 615 ft for the winter,

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COLORADO

ARCHULETA—Juanita Oil Co., Harvey 1, sw 4-32n-3w, stand. 725 ft, due to bad weather.

BENT—Marland Oil Co., Pipe Springs 1, se 27-29s-49w, sd for winter 3987 ft.

JACKSON—Producers & Refiners, State 1, ne 2-6n-81w, sd for winter at 1900 ft.

JEFFERSON—Ruby Hill O. & G. Co., Braden 1, se 14-4s-69w, dr 781 ft.

LAS ANIMAS—Alavier Pete Co., Branson 1, ne 3-35s-58w, sd for the winter. Parker Club, Kinney-Coastal 1, se 4-28s-68w, co 1350 ft. Oklahoma-Colorado O. & G. Co., Doherty 1, sw 32-34-60w, spudded to 50 ft.

LA PLATA—Royal P. & R., Red Mesa 1, 27-33n-12w, sd 650 ft, bad roads.

LINCOLN—Kelly Oil Co., State 1, ne 36-14s-57w, wtg for casing 1403 ft.

MESA—Peerless Oil Co., Hoel 1, ne 23-8s-104w, td 2058 ft, water line frozen.

MORGAN—Badger Creek O. & G. Co., Kent 1, sw 2-50n-10, sd 800 ft.

MOFFAT—Ohio Oil Co., State 1, 16-12-100, 1M gas 3270 ft. Alliance Oil Co., Milliken 1, 14-4n-92w, susp. 3575 ft. McLaughlin et al., Wms. 1, 2-3n-91w, dr 2500 ft. McCormick et al's Sales 2, se 28-4n-92w, ready to spud.

MONTROSE—Uncompahgre O. & G. Co., Colorado Title & Trust Co., 1, 27-50n-10w, dr 1470 ft.

PUEBLO—Rozella Oil Co., Shaw 1, 3-22s-63w, stand 1190 ft, 700 ft oil in hole.

RIO BLANCO—White Eagle O. & R. Co., Fordham 1, sw 9-2s-86w, dr 517 ft.

YUMA—Etnyre Synd., sw 7-2s-43, dr 1471 ft, hole caving badly.

WELD—Platte Valley Pete Corp., Patterson 1, sw 24-6n-61w, sd 4180 ft.

NEW MEXICO

CHAVES—Snowden & McSweeney, Merchant 1, ne 27-15s-23e, strmg to 3458 ft. R. E. Neal et al, Russell 1, 21-14-25e, stand 1100 ft. Warman et al 1, sw 23-13s-24e, stand 251 ft. Tannehill et al, Butler 1, se 15-12s-24e, ready to spud.

DEBACA—Matador Oil Co., State 1, sw 6-4n-20e, dr 630 ft. McAdoo 1, ne 16-1s-27e, lease troubles, td 4190 ft. Transcontinental, McWhorter 1, 6-35-22e, dr 1845 ft.

GUADALUPE—Navajo Oil Co., Goard 1, 10-3n-17e, abandoned 3042 ft Hanchett Oil Co. 2, 14-8n-24e, dr 605 ft.

LEA—Midwest, Capps 31, sw 3-19s-38e, rig up. Midwest, Farnsworth 19, 12-26-37e, fsg 3900 ft. Midwest, Farnsworth 13C, 13-26-36e, dr 730 ft. Marland, Sholes 1, 19-25s-37e, compl. 60 M gas 3034 ft. Marland, Lynn 1, 26-23-36, dr 3630 ft; Brooks 1, sw 8-20-33e, dr 3925 ft; Reed 1, 22-20s-36e, engine trouble, td 2300 ft; Meyers 1, 26-20s-37e, dr 3540 ft; Warren 1, 29-20s-36e, stand cem 2930 ft; Lockhart 1, 31-21s-36e, 6⅝-in cem 3346 ft. Gypsy Oil Co., Mattern 1, 24-21s-36e, ready to spud. Exploration Co., Record 1, 26-19s-35e, td 4556 ft Morton et al, State 1, ne 32-11s-38e, dr 1112 ft. Texas, Lynch 1, se 34-20-34, dr 1120 ft; Sheppard 1, ne 6-26s-37e, spray oil at 3230 ft; Cagle 1, se 9-26s-36e, gas well at 3472 ft; Humphreys 1, nw 18-20s-32e, location; Moberly 1, se 17-26s-37e, dr 3400 ft. Curtis Dr. Co., Nixon 1, 22-18s-34e, sd 1150 ft. Cranfill & Reynolds, Wilson 1, ne 23-25s-36e. location. Skelly Oil Co., Joiner 1, se 26-25s-36e, showing some water 3287 ft. Hill & Able, Maetchtel 1, sw 5-26s-33e, dr 4205 ft. Maljamar O. & G. Corp., Pearsall 2, 30-17s-32e, show of oil 3925 ft. Empire Gas & Fuel Co., State LA, nw 12-21s-34e, dr 2800 ft. Texas Pacific Coal & Oil Co., State 1, sw 22-23s-35e, dr water well. Prairie O. & G. Co., Slattery 1, ne 22-22s-34e, ready to spud. Henderson et al, McDonald 1, se 18-20s-34e, dr 800 ft. Vacuum Oil Co. 1, 14-17-34, location.

ROOSEVELT—J. T. Keegan et al, Pepper 1, 6-1s-36e, ready to bld rig. Smith & Sloan. Lovern 1, se 4-3s-35e, mvg in.

SAN JUAN—Continental Oil Co., Munoz 17, 2-29-19, hole caving, 6338 ft. Dorothy Oil Co., 29-30-9, sd 712 ft. Huerfano Oil Co., Wiltbank 1, 25-29-11 td 800 ft, San Juan Pete Co. 1, 9-29-13s sd 2950 ft. Kirtland Dr. Co., Hunt 1, 10-29-15, td 450 ft. Kutz Canon O. & G. Co., Day 1, 29-28-11, dr 663 ft. Blackrock Oil Co. 1, sw 11-25-13w, sd temp 1550 ft. Iowa Oil

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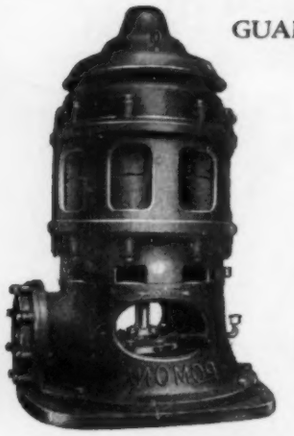

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5,000′— 8¼″ Casing	20,000′—4″ Line Pipe
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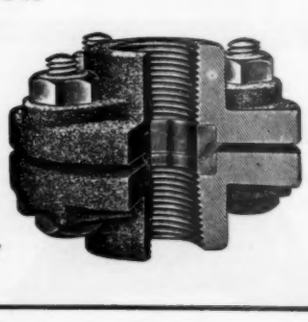

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PROVIDENCE, R. I.

The Fairbanks Company
Distributors

Synd., Viles 2, 28-29-11, plug back to 830 ft. Angel Peaks Oil Co., Kutz Canon 1, 11-28-11w 8¼-in at 1800 ft. R. R. Burke et al, Deneen 1 18-21-13, sd 1006 ft. Hall et al 1, sd 507 ft. Milwaukee-N. M. Synd., Beardsley 1, 30-28n 11w, sd 1100 ft. Childers D. & P. Co., West water 2, nw 24-31n-16w, 8¼-in at 1712 ft.

SAN MIGUEL—E. Adams et al, Deason 1 14-15n-16e, sd 1235 ft. Benedict-Wilson 1, ne 25 17b-16e, sd 800 ft.

TORRANCE—Bluhall O. & G. Co., 26-6n 10e, dr 1531 ft. Hall et al, Pinos Wells 1, sw 25-3n-13e, stndg 400 ft. Sinnock et al, Kutchin 1, ne 13-7n-7e, spdg 69 ft.

VALENCIA—Rio Puerco Oil Co., N. M.-Ariz. Land Co. 2, nw 16-6n-2w, wait pipe 3145 ft. Acme Oil Co., N. M.-Ariz. Land Co. 1, 26-6n-3w, fsg 3595 ft.

COLORADO

ARCHULETA—Juanita Oil Co., Harvey 1, sw 4-32n-3w, stand 725 ft.

BENT—Marland Oil Co., Pipe Springs 1 se 27-29s-49w, sd for winter 3978 ft.

JACKSON—Producers & Refiners, State 1, ne 2-6n-81w, sd for the winter 1900 ft.

JEFFERSON—Ruby Hill O. & G. Co., Braden 1, se 14-4s-69w, dr 732 ft.

LAS ANIMAS—Alavier Pete Co., Branson 1, ne 3-35s-58w, sd for the winter. Parker Club, Kinney-Coastal 1, se 4-28s-68w, ready to resume. Oklahoma-Colorado O. & G. Co., Doherty 1, sw 32-34s-60w, spd 47 ft.

LAPLATA—Royal P. & R., Red Mesa 1, 27-33n-12w, sd 650 ft, bad roads.

LINCOLN—Kelly Oil Co., State 1, ne 36-14s-57w, oil show at 1403 ft.

MESA—Peerless Oil Co., Hoel 1, ne 23-8s-104, td 2058 ft, water line frozen.

MORGAN—Badger Creek O. & G. Co., Kent 1, sw 2-50n-10, sd 800 ft.

MOFFAT—Ohio Oil Co., State 1, 16-12-100, 1 M gas 3270 ft. Alliance Oil Co., Milliken 1, 14-4n-92w, susp 3575 ft. McLaughlin et al, Wms 1, 2-3n-91w, dr 2281 ft. McCormick et al, Sales 2, se 28-4n-92w, ready to spd.

MONTROSE—Uncompahgre O. & G. Co., Colorado Title & Trust Co. 1, 27-50n-10w, dr 1470 ft.

PUEBLO—Rosella Oil Co., Shaw 1, nw 3-22s-63w, stand 1190 ft, oil showing.

RIO BLANCO—White Eagle O. & R. Co., Fordham 1, sw 9-2s-86w, dr 515 ft.

YUMA—Etnyre Synd., sw 7-2s-43, dr 1465 ft.

WELD—Platte Valley Pete Corp., Patterson 1, sw 24-6n-61w, sd 4180 ft.

NORTH LOUISIANA

Company, Well and Location	Completion Initial Production Bbls.	Depth
Benedum & Trees' State 1, 22-14-12	* 3000	

BIENVILLE PARISH — W. P. Wallace's State 1, 16-16-10, rig up.

BOSSIER PARISH—Ark. Nat. Gas Corp.'s Tidwell 1, 29-22-11, tested dry, show oil ds test, 3111 ft, dr ahead. Big Ben Oil Co.'s Stewart 2, 15-18-12, sd wo 1300 ft. Nell & Lanier's Biedenharn 1, 23-21-14, sd 50 ft. Walker et al's Antrim 1, 28-22-14, sd 2985 ft. John F. Woodman's Bolinger 1, 9-22-11, dr 50 ft. Magnolia Pet. Co.'s B. M. Cook 1, 2-22-11, dk. Sallie Coyle 1, 2-22-11, lcn.

CADDO PARISH—D. C. R. Oil Co.'s Hunter Est. 1, 17-19-14, dr 928 ft.

CATAHOULA PARISH—Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, sd 900 ft.

CLAIBORNE PARISH — Dixie Oil Co.'s Gilbert 1, 27-21-5w, fsh core bbl 5003 ft. El Dorado Chief Oil Co.'s Baker 1, 26-20-7, sd 2092 ft. Smitherman & McDonald's Miller 1, 17-23-8, coring 4350 ft.

DE SOTO PARISH — Benedum & Trees' Nicholson 1, 2-15-14, dk; State 1, 22-14-12, salt water, abn 3000 ft. P. J. Becker's Tull 1, 23-12-15, dk. Benson O. & G. Co.'s Jackson 1, 3-10-13, rig up. Luke Cace, Tr.'s Boatright 1, 3-10-13, rebldg dk, td 1810 ft. Carlton Drlg. Co.'s Stephens 2, 12-11-16, dry at 1385 ft and at 1607 ft, sd wo 1607 ft. R. O. Roy's Sample 1, 1-13-14, dr 1310 ft. Thorn Oil Co.'s Burford 1, 22-14-14, dr 2550 ft. Warren & Carruthers' Ramsey 1, 33-13-16, sd 2765 ft.

EAST CARROLL PARISH—Palmer Corp.'s Mitchiner 1, 8-19-11e, dr 2612 ft.

FRANKLIN PARISH—Davis et al's Moore 1, 12-11-6e, dr 1253 ft.

GRANT PARISH — Carter & Collins' Bell

Lbr. Co. 1, 29-7-1w, rig up. Hardtner & Tannehill 1, 9-6-1w, dk.

LINCOLN PARISH—V. E. Shaw's Voss 1, 1-20-3w, set 10-inch csg 60 ft.

MADISON PARISH — Mid-American Pet. Co.'s Yerger 2, 51-16-14e, sd 285 ft.

MOREHOUSE PARISH—Rainbow Oil Co.'s Louisville Cooperage 1, 33-22-8e, dk. Woodley & Collins' Harn 1, 22-22-7e, rig up.

NATCHITOCHES PARISH—Robeline O. & G. Co.'s Cassady 1, 7-8-9w, dr gmbo 2350 ft.

OUACHITA PARISH—Ouachita Nat. Gas Co.'s D'Arbonne B-2, 25-19-2e, sd 3349 ft. Phillips et al's School Fee 1, 16-16-4e, dr 3055 ft.

RAPIDES PARISH — G. E. Silbertson's Willemach 3, 13-5n-4w, sd 2250 ft. Glenmora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RICHLAND PARISH—Richland Operating Co.'s Chapman 1, 19-16-7e, dr 2300 ft. S. C. Wilson's Buie 1, 17-15-7e, sd 50 ft.

SABINE PARISH—W. J. Garnier's Bowman-Hicks 1, 16-7-12, sd 625 ft. R. L. Gay, Tr.'s, Sabine Lbr. Co. 1, 13-7-14, sd in dry limey sand, td 2125 ft. Bowman-Hicks 2, 14-7-14, dr 1379 ft.

TENSAS PARISH—Enochs et al's Curry 1, 39-11-12e sd 3583 ft.

UNION PARISH—G. E. Carmatte's Tugwell 2, 21-22-1e, sd repair rig td 1700 ft. Carter & Wingfield's Clark A-3, 8-23-1e, dk. Hudson 2, 7-23-1e, sd wo 2278 ft. Hudson 3, 7-23-1e, sd wo 2278 ft. Security Trust 2, 7-23-1e, lcn. H. C. McDonald's Union Sawmill 2, 18-23-1e, sd wo 1500 ft.

WEBSTER PARISH—Jones et al's Elkins 1, 33-23-9, temp abn 2690 ft. Magnolia Pet. Co.'s H. H. Branton 3, 6-22-9, dr 1821 ft. Denman 1, 1-22-11, dr 2258 ft. Harry Morris' Lewis 1, 15-23-9, sd wo 2902 ft. John F. Woodman's Boyd 1, 3-22-11, dk pat.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
OUACHITA COUNTY—		
Little Fay Oil Co., Cannada 2, 24-15-16	45	2081

ASHLEY COUNTY—Texas Co.'s Keiffer 1, 11-18-4, cemtd 12½-in cas 450 ft, dr 1573 ft.

BRADLEY COUNTY—Ohio Oil Co.'s Sou. Lbr. Co. 2, 19-16-9, dr 3240 ft.

CALHOUN COUNTY—Joe Hurley's Ark. Land & Timber 1, 29-16-12, cemtd 6⅝-in cas 2303 ft, td 2413 ft.

CLARK COUNTY—Wm. Henry, Tr.'s Clark 1, 34-9-21, sd 1385 ft.

CHICOT COUNTY—W. S. Smith's Meyer 1, 14-19-2, sd wo 850 ft. Joe Crawford's Cashion 1, 14-18-2, ds stuck, td 2330 ft.

COLUMBIA—G. W. Dawley et al's Fullenwider & Kitchen 1, 12-17-22, sd wo 2847 ft.

DALLAS COUNTY — Robt. H. Dedman's Hillman 1, 20-10-13, temp abn, td 1145 ft.

DREW COUNTY—Ohio Oil Co.'s Jerome Lbr. Co. 1, 13-15-4, dr 45 ft.

FAULKNER COUNTY—Gold Creek O. & G. Co.'s Stermer 1, 17-4-13, temp abn, td 3462 ft.

FRANKLIN COUNTY — Ozark Nat. Gas Co.'s McElroy 1, 15-8-27, lcn.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-13-19w, fsh cable tools, td 2800 ft.

JOHNSON COUNTY—Ark. Nat. Gas Corp.'s Bynum 2, 12-10-24, dr 1065 ft. McPherson 1, 10-10-24, dr 1440 ft.

LOGAN COUNTY—Ark. Nat. Gas Corp.'s W. H. Parks 1, 26-8-24, set 6⅝-in cas 3208 ft, sd wo 3609 ft.

MILLER COUNTY — E. A. Martin, Tr.'s Dale 4, 23-15-26, sd wo 2850 ft.

OUACHITA COUNTY—Little Fay Oil Co.'s Cannada 2, 24-15-16, set liner 2081 ft. , 36 ft brown sand, pumping 45 bbls. Primm A-1, 24-15-16, rig up. Chas. McDonald's Wilson 1, 25-15-18, sd fuel 750 ft. McDonald Bros.' Wilson 1, 25-15-18, hole cleaned, sd waiting fuel, 2618 ft, (corrected.) Flaucher et al's Bucks 1, 7-15-17, dk.

UNION COUNTY — Frank Foster et al's McDonald 1, 11-17-18, dk and moving in rig. J. O. Moore, Tr.'s Union Sawmill 1, 11-18-12, bldg dk and moving in rig. Carter Bell et al's Terrell 1, 27-18-14, fsh bit at 1575 ft. J. P. Hawkins et al's Goodwin 1, 6-17-15, sd wo 1204 ft. Tharpe Drilling Co.'s List 1, 25-17-15, sd wo 3050 ft. Foster et al's Murphy Land Co. 1, 22-17-17, dr 870 ft. Calgo Oil Co.'s Primm 1, 9-18-17, coring 3879 ft. Sam Sklar, Tr.'s Fitzgerald 10, 8-18-15, set liner 2190 ft, 48 ft

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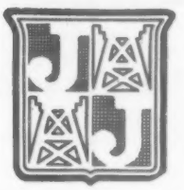

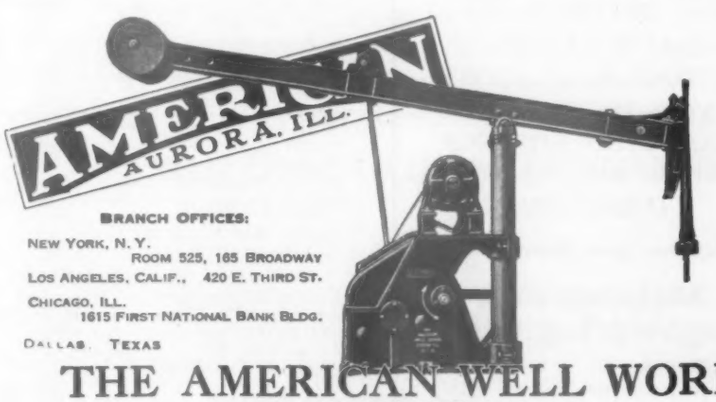

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brown sand, arr to pump. McDonald Bros.' Mayfield 1, 29-19-15, sd wo 1990 ft. Frazier et al's Laney 1, 30-19-16, dk pat. Grimes Bros.' Hill 2, 7-18-14, rig up. J. C. Marcum's DeYambert 1, 5-19-4, sd 2789 ft. Gulf Ref. Co.'s Gaddy 2, 30-17-14, dr 2423 ft. T. J. Woodley 1, 6-18-14, dr 3345 ft.

SOUTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
DOWNEY—		
Associated, Taylor 1, 33-2-12	*	6165

ATHENS—Burlingame Pet. Corp.'s Hamm 1, 128th and Avalon Aves., new lcn.

BELLEFLOWER — World Pet. Corp.'s Blythe 1, sd 5025 ft.

DOWNEY—Rio Grande Oil Co.'s Osborne 1, dr shale 2720 ft.

FULLERTON—Shell's Stern 1, will deepen from 6300 ft.

GARDEN GROVE—The Texas Co.'s Crawford 1, dr hard sand 3575 ft.

HUNTINGTON BEACH—Western Drilling and Producing Co.'s Pacific Ranch 1, fsh for dr pipe 4435 ft.

INGLEWOOD—California-Eastern Oil Co.'s Community 1, 28-3-14, dr shale 3700 ft. McCluskey and Stevens' 1, rigging rotary.

MAYWOOD—Richfield's Vernon 1, dr shale 3900 ft.

NEWHALL — California-Eastern Oil Co.'s Hasley 1, dr 3150 ft, failed on production test.

PUENTE—Richfield's Didier 1, showed water on test, td 3435 ft.

RIVERSIDE—Hemet Pet. Corp.'s Ward 1, setting packer at 1450 ft, td 3230 ft.

SAN BERNARDINO COUNTY—Western Pacific Oil Co.'s 1, dr shale 3375 ft. Mahala Oil and Gas Co.'s 1, co 4000 ft.

SAN DIEGO COUNTY — S. S. Turner's Baler 1, dr sand 1610 ft.

IMPERIAL COUNTY—Imperial Valley Pet. Co.'s 1, 12½-inch casing cemt 1130 ft.

NORTHERN CALIFORNIA

Milham Explo. Co., Wisnom 1, 27-28-23	*	4500

KERN COUNTY

BUTTONWILLOW—Doheny-Stone Drilling Corp.'s 1, 7-29-24, dr 4000 ft, td 4525 ft. Richfield's Kerwin 1, 21-26-23, making prod. test, td 4760 ft.

COMANCHE POINT—W. W. Stabler's Tejon 1, 23-32-29, dr gray shale 3300 ft.

DELANO—S. A. Delzel's Vedder 1, 4-26-27, dr shale and shell 3450 ft.

EDISON—Symark Oil Co.'s 1, 24-29-29, dr shale 900 ft.

GOULD HILLS—Exeter Oil Co.'s Pray 2, 1-29-29, producing 20 bbls oil, td 870 ft.

KERN RIVER—Richfield's 1, 20-28-28, new lcn.

RIO BRAVO—Elmer Oil Co.'s 1, 8-28-25, fsh 5500 ft.

ROSEDALE—Elmer Oil Co.'s 1, 33-29-26, lcn.

SHALE HILLS—No active tests in this district.

SAN EMIDIO—Standard's 1, 35-11-22, dr 3790 ft. Union's KCL-1, 5-10-21, dr hard sand 2115 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Continental's Franklin 1, dr shale 3430 ft.

GOLETA—Elwood Consolidated Oil Co.'s Rekar 1, 8-4-29, plugged to 2900 ft.

ORELLA—Shell's Rutherford 1, 36-5-31, 18-inch cas cemt 630 ft.

POINT ARQUELLO—Standard's Schyvers 1, dr shale 900 ft.

POINT CONCEPCION—Standard's Gerber 1, rigging rotary.

SANTA BARBARA—Channell Oil and Development Co.'s 1, 29-4-27, co 6100 ft, td 6300 ft.

SANTA MARIA—Shell's Union Sugar 1, 36-10-35, coring 1625 ft.

VENTURA COUNTY

BARDSDALE—Triple A. Investment Co.'s Elkins 1, 28-4-19, rigging rotary, td 2900 ft.

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr rock 745 ft.

CONEJO—Triunfo Oil Co.'s 1, 24-1-19, dr 400 ft.

FILLMORE—No active tests in this district.

OJAI—Continental's Fox 1-M, 21-4-22, dr shale 3464 ft; Thompson 1-A, 22-4-22, dr shale 4175 ft. E. J. Miley's Casitas 2-A, 13-3-24, changing to rotary, td 775 ft. Rancho Riva Oil Co.'s 8, 28-4-23, fsh 270 ft.

PIRU—Bolsa Chica Oil Corp.'s Hidden 1, 4-4-18, dr 350 ft. Rio Grande Oil Co.'s B. B. N. 1, co 2200 ft. Pacific Western Oil Co.'s 5, 3-4-28, dr 3250 ft.

SANTA PAULA—W. W. Bryant's Anlauf 3, 21-4-21, dr 300 ft.

SATICOY—Standard's Citrus 5, 10-2-22, dr hard sand 4550 ft.

SIMI—Shell's Marr 1, 31-3-17, dr shale 1400 ft.

SOUTH MOUNTAIN—Ring Pet. Co.'s Converse 1, 23-3-21, preparing to test, td 4840 ft.

VENTURA—Star Pet. Co.'s Canet 1-A, sd 6775 ft.

MISCELLANEOUS

FRESNO COUNTY — Fresno-Madera Oil Co.'s 1, 18-12-21, re-running 4¾-inch casing, td 4150 ft.

KINGS COUNTY—Dudley Ridge Synd.'s 1, 12-23-19, dr 875 ft.

SAN LUIS OBISPO COUNTY—Dollar Oil Co.'s 1, 13-32-22, rigging rotary. Panorama Oil Co.'s 1, 7-31-21, dr shale 3585 ft. San Luis Synd.'s 1, 29-31-12, co 3100 ft. See Canyon Oil Co.'s 1, 18-31-12, sd 925 ft. Texas Pacific Coal and Oil Co.'s Dutton 1, 25-32-14, dr shale 2222 ft. Union's Russ 1, 34-32-15, dr 3200 ft; Chandler 1, 12-32-15, cemt 10-inch casing 2850 ft.

MONTEREY COUNTY—Shell's Dudley 1, 15-22-9, lcn.

TULARE COUNTY—Angiola Dev. Co.'s 1, 27-22-23, dr gray sand 3410 ft.

KANSAS

BARBER COUNTY—Barbara Oil Co.'s Lytle 1, CNL ne ne sw 12-33-13w, dr 2150 ft; Blunk 1, c ne nw 20-34-13w, fsg 4755 ft. Rolands et al's Pickens 1, ne nw ne 27-30-14w, sd 4223 ft. Allison & Fitzwilliams' Morrise 1, c nw se se 9-30-12w, rig.

BUTLER COUNTY—LaRobb et al's Bronsenger 1, ne se 24-27-3e, ru. Barnsdall's Means 1, nw sw 34-27-2e, hfw, 3240-42 ft.

CHASE COUNTY—Grismer & Fowler's Carson 1, ne ne 9-21-7e, sd 3150 ft.

COWLEY COUNTY—Pyle & Sutter's Lind-

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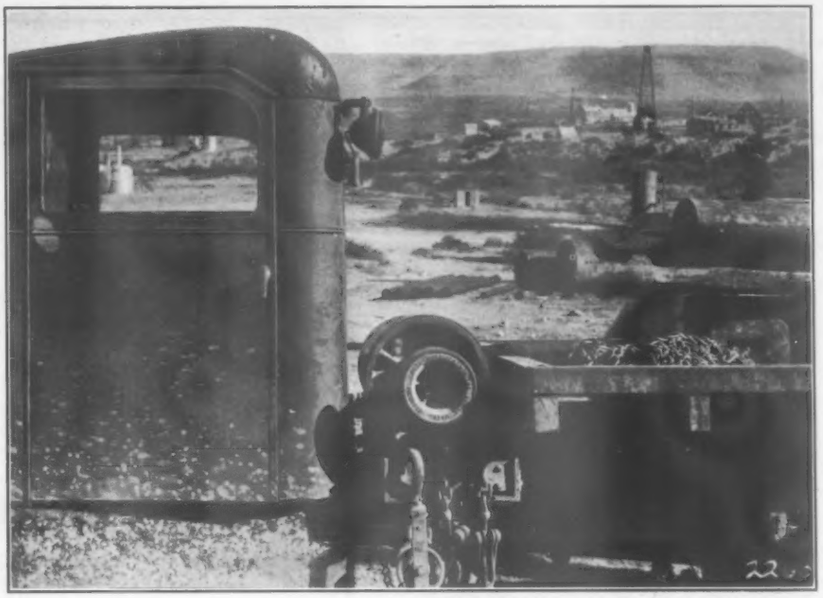

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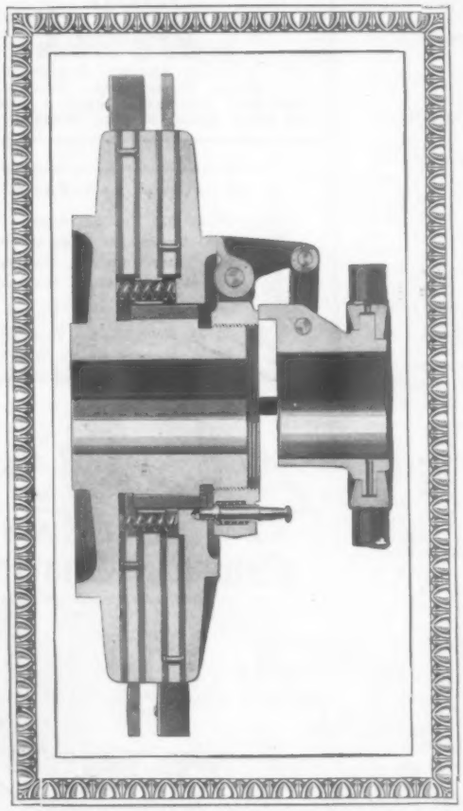

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strum 1, se ne 9-35-4e, d 2515 ft. Empire-Marland-Twin State's Feaster 1, nw ne 36-32-5e, co 3115 ft. Wakefield & Osborne, Osborne 1, nw ne 18-30-5e, ru.

EDWARDS COUNTY — Amerada-Wilcox, Teansil 1, nw cor 32-25-19w, d 4165 ft. American Oil Co.'s McCarty 1, ne nw 31-25-17w, d 750 ft.

ELLIS COUNTY—Rush Oil Co.'s Gatewood 1, nw 4-15-20w, sd 1100 ft. Finney & Weimer, Freeman 1, nw se se 24-15-20w, spd and sd. Empire's Wann 1, ne 31-12-19w, 20 bbls oil, 20 bbls water 3560-64 ft. Marland's Vine 1, sw se 27-11-9w, HFW 3842 ft, D & A. Transcontinental's Botcher 1, nw se sw 21-13-19w, fsg 3858 ft. Phillip's Brull 1, c nw 34-14-17w, set 10-in cas 2670 ft; Schmeidler 1, nw cor 20-12-17w, d 860 ft. Labette Oil Co.'s Urbank 1, ne nw nw 19-15-16w, d 3745 ft. Cosby et al's Robbins 1, sw nw 15-14-16w, ru. Phillip's Johnson 1, sw ne 9-13-19w, d 200 ft. Derby & Empire's Krause 1, nw sw sw 17-14-19w, 150 ft OIH at 3829 ft. Davis & Hazlett Weiland 1, nec 1-13-18w, set 8-in cas at 2630 ft.

GREENWOOD COUNTY—P. H. Balieu's Bright 1, ne sw 22-27-1e, sd 1210 ft.

HARPER COUNTY—Amerada's Mendiville 1, c se se 24-34-6w, co 5353 ft.

HARVEY COUNTY — Margaret Gay Oil Co.'s Grouse 1, nw ne nw 29-23-1w, 15-in cas at 384 ft. Helmerick & Payne Lindawood 1, c sw ne sw 2-22-1e, dr 450 ft. R. F. Garland's Cox 1, ne cor 27-24-1w, 8-in cas at 2204 ft. Fisher & Lauck's Regier 1, nw ne 17-23-2e, dr 1300 ft. Austin's Neiman 1, swc 21-29-2c, sd 2936 ft.

JEFFERSON COUNTY — Wichita Oil Co.'s Simpson 1, nw sw sw 19-10-17e, ru and sd.

LANE COUNTY—Blakenship Pet. Co.'s Schaeffer 1, nec ne 24-16-28w, spd and sd.

MARION COUNTY—Connell & Prairie's Zirak 1, se sw 3-18-3e, rig. Meyers' Papp 1, sw ne 10-18-2e, spd. Hartman & Sbaer & White Eagle's Kline 1, ne nw 28-18-3e, rig.

MARSHALL COUNTY—Irwin et al's Cooper 1, ne nw 10-3-7e, spd.

MORRIS COUNTY—Hiatt et al's Blythe 1, nw ne 35-15-5e, rig.

MCPHERSON COUNTY—McPherson County Gas Co.'s Stein 1, sw ne sw 17-18-1w, dr 3450 ft. Ted Washabaugh's Vosshell 1, ne ne 9-21-3w, dr 2320 ft. Lariaux et al's Martinan 1, ne se 9-19-3w. Mid Kansas' Yoder 1, c nw sw 8-20-4w, dr 2410 ft.

NESS COUNTY—Barnsdall's Lauck 1, c sw 35-18-21w, dr 1095 ft.

OSBORNE COUNTY—L. D. Jarvis Jellison 1, sec 13-10-15w, dr 620 ft.

OTTAWA COUNTY—Anderson et al'sBank 1, ne nw 28-10-2w, sd 2820 ft.

PAWNEE COUNTY—F. C. Troupe's Lovett 1, cel ne ne 31-21-16w, sd 1560 ft.

PHILLIPS COUNTY—Watsonian Oil Co.'s Marklein 1, ne sw 21-3-19w, dr 3410 ft. Watsonian and British-American Weiman 1, c sw sw 34-2-19w, dr 685 ft.

RICE COUNTY—Allison & Fitzwilliams' Poland 1, ne sw ne 36-10-8w, cellar. Higgins & Steinbuble, Shurr 1, ne sw 21-20-10w, dr 375 ft.

RUSH COUNTY—Danciger O. & R. Co.'s Pinonka 1, c ne sw ne 17-19-17w, sd 530 ft. Sinclair's Beiching 1, nw ne nw 9-16-16w, dr 3613 ft. Centarl Commercial's Brack 1, nec sw sw 12-17-16w, rig. Phillip's Legleiter 1, c ne nw se 10-16-18w, dr 440 ft.

SALINE COUNTY—M. Esty et al's Peterson 1, c ne 6-16-5w, spd and sd. Nathan-Jones et al's Robertson 1, nw sw 27-14-2w, dr 2946 ft.

SEDGWICK COUNTY—Magnolia's Wise 1, nwc 36-28-2w, spd. Bu-Vi-Bar Pet. Co.'s Steel 1, sec 1-26-2w, dr 3631 ft. Barnsdall's Samuels 1, ne nw 24-25-1e, sd 3055 ft, 1200 ft fluid; Faber 1, sw ne 6-27-1w, sd 3010 ft. Morgan & Tilley's Fitzgerald 1, nw ne 5-26-1w, ru. Van Zandt & Mason's Fox 1, c nw sw 19-25-1w, fsg 3030 ft. Connell Oil Co.'s Cross 1, ne cor 27-25-1w, dr 3040 ft. Morgan et al's Corn 1, sw ne 28-25-1w, dr 2150 ft. Kyser et al's Stroot 1, sw nw 28-26-2w, dr 1860 ft. H. H. Patton Ryder 1, nec 22-25-1e, dr 1015 ft. Lario & Blair's Tjaden 1, c ne se 22-29-2w, dr 2100 ft. Maglason's Buckles 1, nw se 3-28-1w, sd 250 ft. McCulloch et al's John 1, c ne sw ne 24-29-1e, dr 2150 ft. Miller & Wentz's Shaffer 1, nw ne 9-27-2w, rig. Lewis et al's Taylor 1, nw ne 23-27-2e, sd 1450 ft. Shower et al's Reeves 1, c se sw se 19-28-1e, dr 600 ft. Austin Drlg Co.'s Stuckey 1, sw nw 12-26-5w, timbers. Washabaugh's Lowery 1, c nw ne ne 3-26-2w, rig.

SHERMAN COUNTY—A. L. Henson et al's Murray 1, ne se nw 22-7-40w, sd 3035 ft.

SMITH COUNTY—Mid-Kansas' Blank 1, nec 4-2s-13w, dr 1125 ft.

STEPHENS COUNTY—W. Sidwell et al's Kelly 1, sw ne 16-34-38w, sd 1160 ft. Trees Oil Co.'s Unknown 1, sw ne sw 3-35-38w, dr 300 ft. McKenna et al's Hamm 1, se ne 10-33-38w, dr 1510 ft.

SUMNER COUNTY—Gypsy's Williams 1, nw se sw 16-35-3w, fsg 4400 ft. McCulloch et al's Tuttle 1, sw ne 29-34-1w, sd 4632 ft. Davidson et al's Strickland 1, sw se 12-35-1w, rig.

TREGO COUNTY—Central Commercial Oil Co.'s Ellis 1, ne sw ne 25-13-12w, dr 3286 ft.

WASHINGTON COUNTY—McCool & Vicent's Linn 1, nw ne 27-4-3e, ru.

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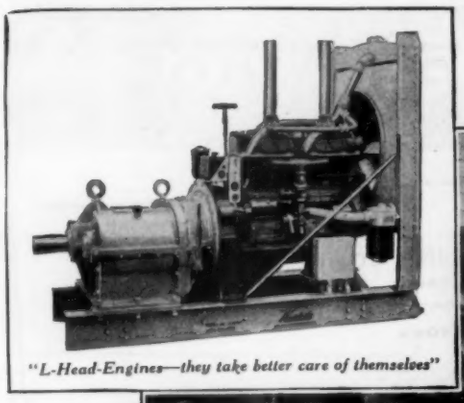

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Shaffer Tool Works Will Manufacture Deep Well Pump

Beginning production on an entirely new line, involving additions to buildings and equipment as well as trained shop and field men, the Shaffer Tool Works, Brea, California, has undertaken the manufacture and marketing of a deep well oil pump of novel design, it has been announced by W. D. Shaffer.

A deal has just been closed with the Byron-Jackson Pump Company of Los Angeles, who until recently were manufacturing the pump under a working agreement with P. H. Bray, original patentee. All pumps, parts and material on hand, together with assembling equipment, have been transferred to the Shaffer Tool Works Brea plant.

The plunger of the new Shaffer pump is not actuated by sucker rods, as in the usual oil well pump, but is anchored and remains stationary in the tubing. The barrel or outside sleeve is connected with the rods, and is the only moving part.

As now being put on the market, the pump is a combination of various patented features, with changes and improvements developed by Shaffer engineers.

Lloyd Sawyer, formerly at the Slauson Avenue plant of the Byron-Jackson Pump Company, has been added to the Shaffer shop force, and George S. Hanson, until recently with the Fluid Packed Pump Company of Los Nietos, will represent the new pump division in the field.

Non-Breakable Pump Cradle

LUCEY CORPORATION

Lucey Corporation's 12,000 Duplex Pump presents its strongest feature in its insurance against breaking the cradle. Tying the steam and water ends together, the cradle is a one-piece casting bored and fitted over the stuffing box flanges, giving perfect alignment.

Heavy steel rods, one on each side of the pump, reinforce the cradle to prevent it from being broken or cracked. The ends have eight machined feet mounted and bolted to heavy H-beams, serving as skids and foundation, to secure perfect rigidity and to maintain permanent alignment.

This pump is built for handling large volumes of slush and muddy fluids under high pressure as required in deep well drilling. Its construction embodies the best materials available, and it is one of the heaviest made.

Each pump is given a rigid and severe test under critical inspection before leaving the factory.

Additional information may be had by addressing the company at Chattanooga, Tennessee, or any branch office.

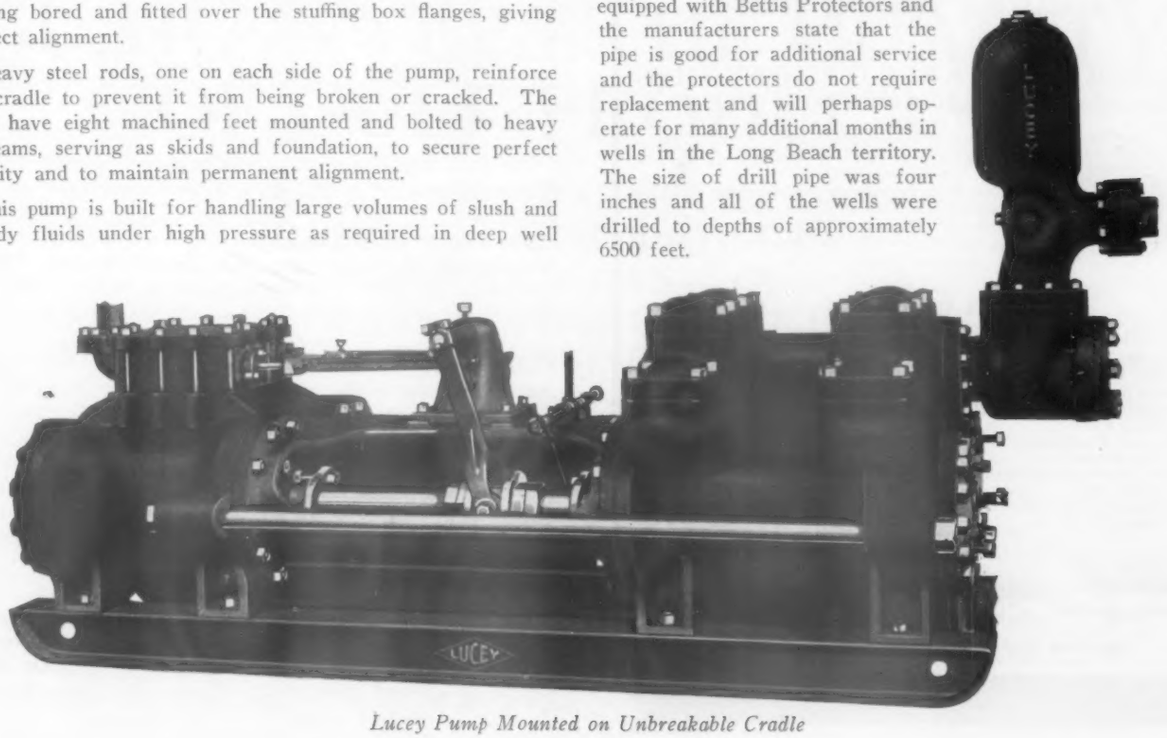
Bettis Protectors Make Long Run

Richfield Oil Company has completed an interesting test of anti-friction tool joints equipped with Bettis Protectors; the test having embodied 10 months of continuous service, drilling 6818 hours with only eight idle days since last March.

The string of pipe, approximately 6500 feet long, was equipped throughout with B. J. Anti-friction tool joints and was first installed for test purposes in Richfield Oil Company's Green 5, in the Long Beach field, March 28, 1928. On April 12 the string was transferred to the Hass well where it was operated for approximately five weeks and was transferred May 22 to Freeman 4. A month later the string started operation in the Socco 1, being transferred on August 23 to the Bernstein 3. After several weeks of service it was placed on the rack November 2 for an idle period of eight days and on November 10 was installed in Freeman 5, where it has operated until the latter part of January, bringing the total to 6818 hours, which is believed to be one of the longest tests of a specialty in the oil industry.

Inspection of the tool joints reveals that they are practically as good as when installed 10 months ago and during this long period of continuous drilling, not a single replacement of collars or tool joints was made.

This incidentally was the initial test made of the Hopkins Patent Anti-Friction Tool Joints equipped with Bettis Protectors and the manufacturers state that the pipe is good for additional service and the protectors do not require replacement and will perhaps operate for many additional months in wells in the Long Beach territory. The size of drill pipe was four inches and all of the wells were drilled to depths of approximately 6500 feet.



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A. P. I. Master Gauges

A special group order is now being formed for the purpose of purchasing the necessary master gages for the three small sizes of cable drilling tool joints recently adopted by the Special American Petroleum Institute Committee on the Standardization of Cable Drilling Tool Joints. These sizes are as follows:

1 x 1½"—8
1⅛ x 1¾"—8
1½ x 2¼"—8

The Cable Tool Committee also passed a resolution making the 1⅛ x 1¾—8 size the standard A. P. I. joint for all rope cutting tools.

Further information, with full details regarding prices, etc., is contained in Circular S-263, which may be obtained on application to the American Petroleum Institute Division of Standardization, 1508 Kirby Building, Dallas, Texas.

Wilson-Snyder Catalog

Wilson-Snyder Company, builders of heavy duty pumps for more than a half century, Pittsburgh, Pennsylvania, has a new eight-page catalog recently off the press describing with illustrations their pumps devoted to main pipe line service.

Interested operaters will be mailed a copy of this complete catalog giving the outline of the newest types of equipment and the type of service given individual orders prior to shipment.

Manufacturers Notes

Controlling interest in the Standard Boiler & Plate Company, Niles, Ohio, has recently been acquired by John H. Warne, former president and general manager of the William B. Pollock Company, and Edgar J. Reilly, former general manager of sales of the same concern.

Plans for adding new equipment to the present plant to diversify steel plate fabrication are completed and rail facilities for handling shipments are being augmented by the new control. Steel plate welding and riveting for construction in steel works is being added to the manufacture of boilers, tanks and oil refinery equipment.

The plant has a main factory building 160 x 375 feet, is equipped with modern boiler shop machinery, and employs approximately 50 men.

Hercules Supply Company has opened a branch store at Merkel, Texas, to serve Jones, Fisher and Taylor County oil fields.

The store is being fully equiped with a complete and general line of all kinds of oil and gas well supplies. Harry Cookston, formerly with the company at Wink, Texas, has been transferred to Merkel to take charge of the new store.

The derrick division of the McGraw-Bearly Lumber Company, Tulsa, will in the future be known as the Monarch Derrick Company. B. E. Sanders of the Coleman-Sanders Company, rig building contractors, has been named manager of the Monarch Derrick Company. Offices of both companies are in the Exchange Bank Building. The McGraw-Bearly Lumber Company will continue its lumber business throughout Oklahoma. F. D. Bearly of Oklahoma City is president of both the lumber company and the Monarch Derrick Company.

The Standard Steel Works of Kansas City has opened an office in Tulsa, with Earl Dunagin in charge. The office is at 1220 Hunt Building. This concern serves all branches of the petroleum industry with steel products. The Tulsa office is the first oil country office.

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Say you saw it in The OIL WEEKLY

Others are making more hole — so can you

Am trying your "K-P" Bit and like it fine. The "K-P" makes plenty of hole where the fishtail won't go. I made 72 feet in 6 hours in lime shell and I don't believe there is another bit that will make it.
F. W. Caughfield*

*Driller for Coyle-Concord Oil Co., Big Spring, Texas.

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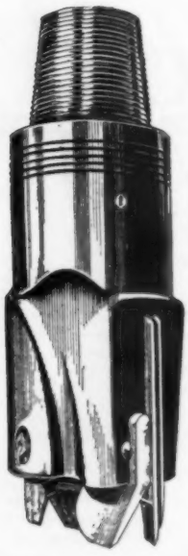
THE LINE OF LEAST RESISTANCE

STRAIGHT-HOLE Rotary Drilling Bits



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"Continental" — "National" — "Oil Well" supply company branch store.

SQUEAKS FROM THE BULL WHEEL

The old cow-man was back on the range, after his first visit to Cheyenne in many, many years. "And do yer know," he was saying to the cow-hands, "in that 'ere hotel room the light burned all night."

"Why didn't you blow it out, Bill?" spoke a comrade.

"I tried my goldarndest," he replied, "but they had the light in a glass bottle."

A Defending Counsel—You say that the fence is eight feet high, and that you were standing on the ground—not mounted on a ladder or anything?

Witness—I do.

Counsel (triumphantly)—Then perhaps you will explain how you, a man little over five feet, could see over a fence eight feet high, and watch the prisoner's actions.

Witness (calmly)—There's a hole in the fence.

A southern storekeeper, who was also justice of the peace, was sitting in front of his store when a colored man drove up.

"Say squire," the latter announced, "dat woman you married me to las' week has ten chillun, an' every one of dem plays some kin' ob a musical inst'ument."

"Why, that a regular band, Mose," replied the justice. "Do you want me to send off and get you a horn too?"

"No, suh," was the dismal response. "Ah wants to git disbanded."

A traveler stopped to change tires in a desolate region in the Far West.

"I suppose," he remarked to a native onlooker, "that even in these parts of the country the bare necessities of life have risen tremendously in price."

"You're right, stranger," replied the native gloomily, "and it ain't worth drinking when you get it."

"What we want is a candidate who isn't too radical nor yet too conservative; in short, a middle-of-the-road man."

"Then Jimpkins is the man to nominate. He's been a bus driver for years."

Young Oswald was an officious young man, as every one in the firm's employ agreed.

He was always horning in where he was not wanted, and he had a highly exalted opinion of himself.

There were two partners in the firm, and one of them happening to pass on, the young man approached the surviving partner, with whom he was not exactly what you could call a favorite.

"I am sorry, sir, to hear of Mr. John's demise, and I have come to ask if you would like me to take his place."

"Yes, I should very much," was the reply, "if you can get the undertaker to arrange it."

"Hello, Roy, I hear you have an addition to your family."

"Yes; two."

"Oh, twins, eh?"

"No, a baby boy and my wife's mother."

Padre—You'll ruin your stomach, my good man, drinking that stuff.

Old Soak—'Sall right, 'sall right. It won't show with my coat on.

Sweet Young Thing—Have a cigarette?

Old Maid—What! Smoke a cigarette? I'd rather kiss the first man that came along.

"So would I. But have a cigarette while we're waiting."

"Did you have much call for mistletoe this year?" asked the last minute shopper.

"Might as well have stocked up with high shoes, ankle length underwear and hatpins," growled the dealer.

Mark Twain had finished his speech at a dinner party, and, on seating himself, a lawyer arose, shoved his hands deep into his trouser pockets, as was his habit, and laughingly inquired of those present:

"Doesn't it strike this company as a little unusual that a professional humorist should be so funny?"

When the laughter that greeted this sally had subsided, Mark Twain drawled out:

"Doesn't it strike this company as a little unusual that a lawyer should have his hands in his own pockets?"

Skipper: "Young girls nowadays sure dress fit to kill, don't they?"

Engineer: "Yeah, and they cook the same way."

Rastus (stumbling upstairs at 3 a.m.): "De old gray mare she ain't what she used to be."

Mandy (coldly): "But de old white mule still am."

Nice Kid (at his first circus): "Ooo, that's an elephant!"

Newsy: "N'elephant, that all you know! Ain't I seen them things in the papers every day wid GOP right on 'em? I tell ya, it's a gop."

I met her in the garden;
The night was still as death;
I knew she knew her onions,
'Cause she had 'em on her breath.

A professor, coming to one of his classes a little late, found a most uncomplimentary caricature of himself drawn on the board. Turning to the student nearest him, he angrily inquired:

"Do you know who is responsible for that atrocity?"

"No, sir, I don't," replied the student, "but I strongly suspect his parents."

"Do you use tooth-paste?"

"Mercy, no; none of my teeth are loose."

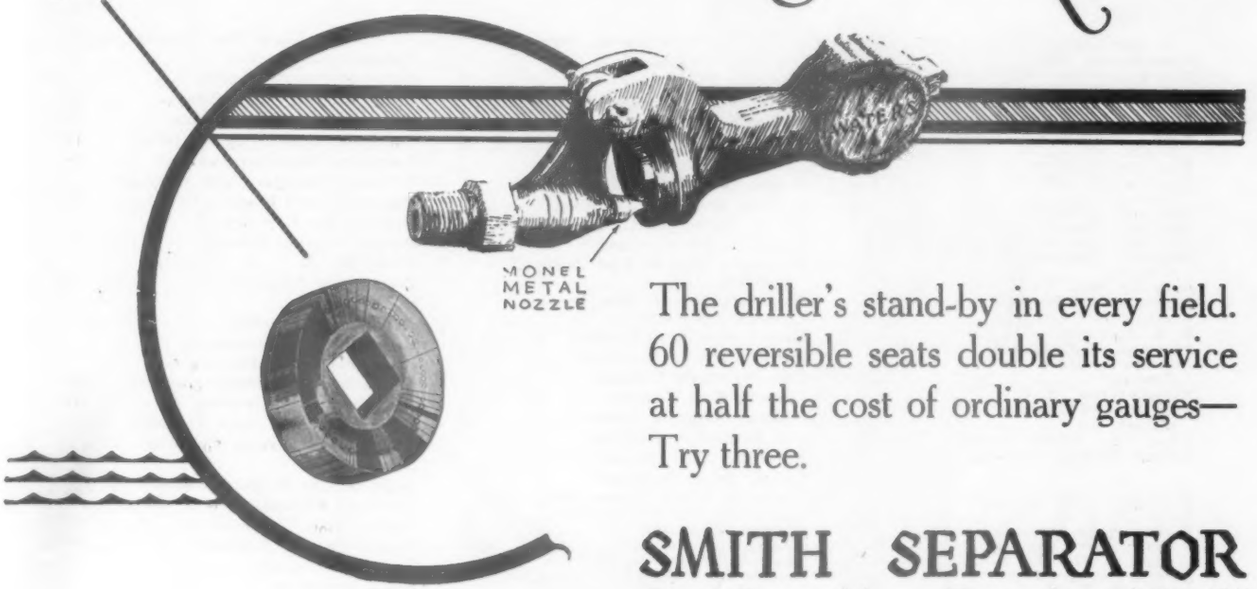
Mrs. Jones: "I don't believe Helen's young man is just all we thought he was, John."

Mr. Jones: "What's the trouble now?"

Mrs. Jones: "He hung his hat over the keyhole."

The Waters Gauge Cock

60 SEATS



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Oklahoma Stock—Harrisburg Supply Co., Tulsa, Oklahoma.

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NEWPORT KENTUCKY

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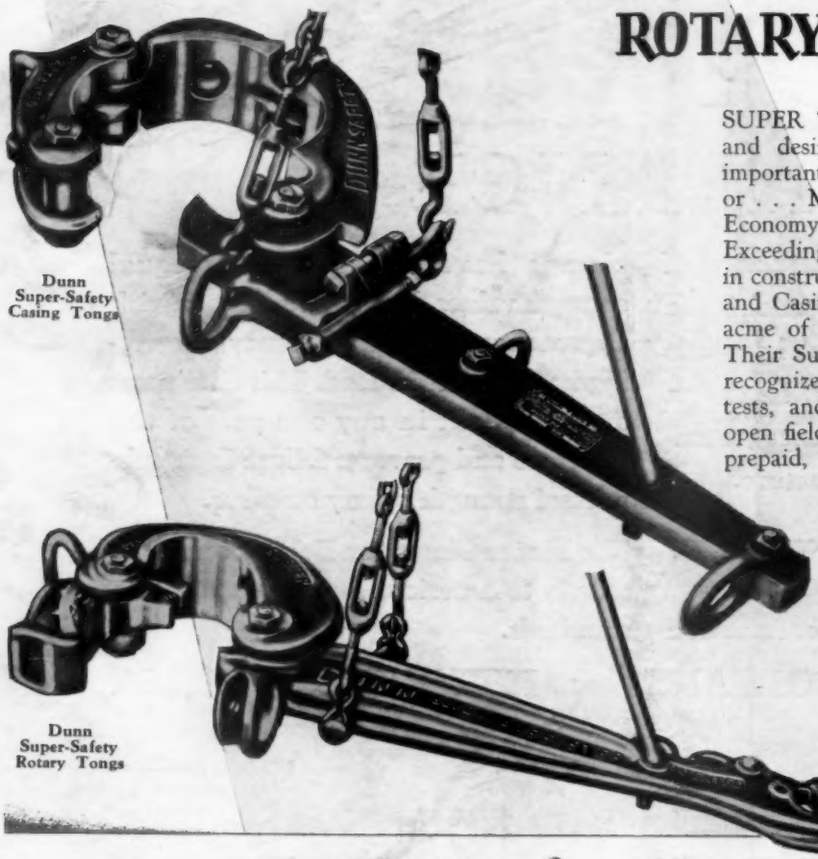

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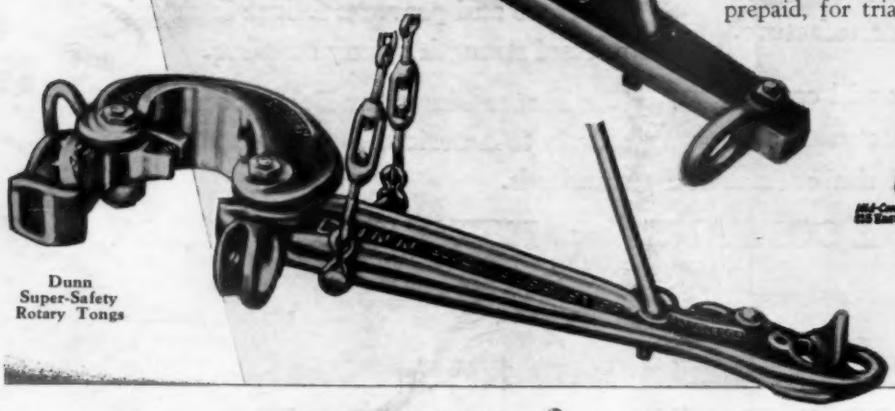

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